

Table of Contents

Annex I. Household Consumption and Expenditure	1
I.i. Sources of Food	1
I.ii. Local Diets.....	2
I.iii. Household Economy	3
I.iv. Poverty.....	6
Annex II. Food Security	9
II.i. Livelihood Zones	9
II.ii. Latest Food Security Assessments.....	11
II.iii. Seasonality and Prices	15
II.iv. Price Analysis	16
II.v. Malnutrition	36
II.vi. Water, Sanitation, and Hygiene.....	37
Annex III. Detailed CDSO IPP Calculations	38
Annex IV. Methodology for Determining Impact of Monetized Food Aid	40
Annex IV.I FFP FY12 Commodity List	49
Annex IV.II FFP Policy on Use of Milk Powder for Monetization	52
Annex VI.III Survey Questionnaire for Potential Buyers of Title II Monetized Commodities	54
Annex IV.IV Survey Questionnaire for Current NGO(s) Monetization Unit.....	55
Annex V. Methodology for Determining Impact of Distributed Food Aid	59
Annex V.I BEST Rapid Assessment Tool.....	71
Annex V.II Description of Proxy Indicators of Additionality	76
Annex VI. Contacts.....	80
Annex VII. References.....	84

Annex I. Household Consumption and Expenditure

I.i. Sources of Food

In rural areas, Guatemalans produce some portion of their own food, especially maize. Maize is the most commonly-grown crop for own consumption. About 36 percent of households reserve all production of crops for consumption (and do not market any surplus for sale) (FAO, 2009). Main production areas of basic grains include Petén, Alta Verapaz, Jutiapa and Quiché (MAGA, 2011). (WFP, 2005)

Table 1. Main Basic Grains Production Areas (% of total production)

Department	Maize	Beans	Rice
Petén	18.4	17.0	10.4
Alta Verapaz	13.1		13.2
Jutiapa	6.6	13.5	18.5
Quiche	8.1	9.9	
Huehuetenango	7.5	8.1	
Chiquimula		8.4	9.6
San Marcos	4.7		13.3
Izabal	4		
Jalapa		6.4	
Santa Rosa		6.0	
Quetzaltenango			5.1

Source: (MAGA, 2011)

Households also depend, to varying degrees, on market purchases to meet household food needs. As shown in Table 2, the extremely poor rely more on market purchases for maize and beans than the poor; this could be due in large part to the fact that poor households have more access to land than extremely poor households. Food aid beneficiaries interviewed by the BEST team¹ in July-August 2011 noted they go to the market as frequently as once a week, or as infrequently as once a month. Main markets are located along the Inter-American highway, including large markets in Jutiapa, Guatemala City, Chimaltenango, Quetzaltenango, Totonicapán, and Huehuetenango. Most departmental capitals have larger markets, including Escuintla, Retalhuleu, Flores, Cobán, and San Marcos (WFP, 2005).

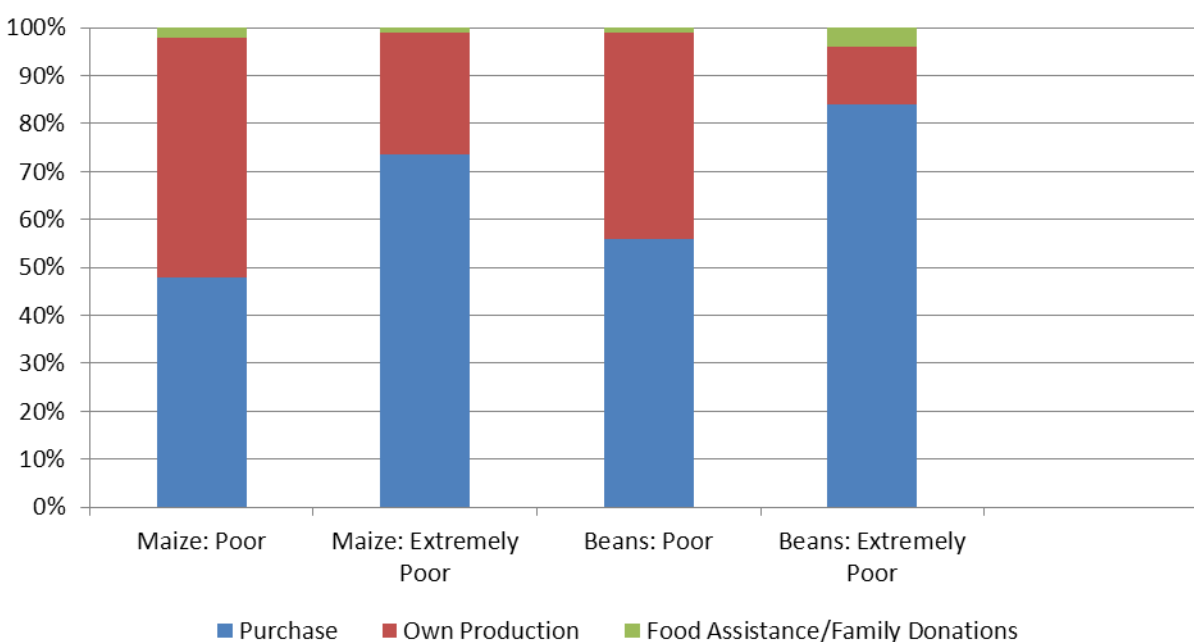
As previous studies have reported, Guatemalan households' food supply is not solely a result of availability of domestically-produced foods, but rather of the household's financial access to markets (Ziegler, 2006); BEST fieldwork in July-August 2011 suggests the same conclusion. Poor families do not source enough income to depend solely on market purchases; a 2006 report noted that the minimum wage in Guatemala could only purchase 56 percent of the food basket (Ziegler, 2006). In addition, other studies report that in 2009, the legal minimum wage (Q1,560 per month) could not afford all the household living expenses, even if both parents in a standard five-person family worked full time (APRODEV, 2010). Currently, in rural areas, WFP estimates that minimum wage covers around 75 percent of the basic food basket; while 70 percent of all the population is below the poverty line (WFP). When households have money to

¹ The BEST team interviewed beneficiaries in Alta Verapaz, Huehuetenango, and San Marcos.

access markets, they have the option of purchasing a variety of goods. All staple foods are generally available in the local market, including beans, rice, maize, pasta, and vegetable oil. Fruits, vegetables, and spices are available. A large array of imported staples and processed foods are widely available at municipal markets, which primarily originate from Mexico but also from other Central American countries.

Supermarkets are also expanding in Guatemala; the number of supermarkets in the country has doubled since 1990 (IFPRI, 2007). Households who shop at supermarkets consume a higher amount of processed foods, and households who do not shop at the supermarkets have higher consumption levels of maize, maize products, and beans (IFPRI, 2007).

Table 2. Sources of Maize and Beans, Poor and Extremely Poor



Source: FEWS NET, 2007 Livelihood Zone Report

I.ii. Local Diets

Average per capita, per day, caloric intake in Guatemala is 2,171 (FAO, 2011); however, averages speak little for a country with the 11th highest Gini coefficient in the world (CIA, 2007).

Cereals account for about 60 percent of Guatemalans' caloric intake, with sugar, oil, eggs, meat, fruit, and vegetables accounting for the remainder (WFP and FAO, 2010). Maize is the most-consumed cereal (an average consumption (mostly white, yellow to a lesser extent) of 102 kg per capita, per year), followed by beans (10 kg per capita, per year), and rice (5-7 kg per capita, per year) (WFP and FAO, 2010) (Delta Farm Press, 2009).

Maize forms the base of popular foods such as tortillas, tamales, enchiladas, tacos, and atols (hot drinks). A large number of maize varieties are grown in Guatemala; reasons for doing so include: 1) different varieties are better suited to different soils; 2) a way to manage risk; and 3)

culture and tradition (Isakson, 2010). Furthermore, the varieties of maize add diversity to a somewhat monotonous diet. As one interviewee of a recent study noted:

"We grow many classes of maize because we like colors...Nobody wants to eat black maize every day. Guatemalans are people of maize. We eat tortillas all day long, tortillas with chilies." (Isakson, 2010)

Atol is a hot, porridge-like drink usually made of maize flour (masa). Masa is usually heated on a griddle, and then combined with water and cinnamon and/or sugar. Atol can also be made salty, using black or yellow maize. Other atol varieties are based on rice flour or oatmeal, and some atols include chocolate or fruit. Atol made with red maize is recommended for medicinal purposes (Isakson, 2010).

Tortillas are served at almost every meal, and are made at the household level as well as at the market. White maize, and sometimes yellow or black maize, usually forms the base of tortillas (Isakson, 2010). During the BEST field visit, some food aid beneficiaries reported also making tortillas out of CSB.

Beans, especially black beans, are also common in the Guatemalan diet. Beans can be consumed with breakfast, lunch, and/or dinner, and provide the primary source of protein for households with limited access to meat (FEWS NET, 2011). They are served whole, refried, or mashed.

Dietary diversity differs among socio-economic classes. Very small-scale farmers of basic grains in Guatemala's dry corridor have the least diverse diet, and consume mostly maize, beans, and sugar. Subsistence farmers outside of the dry corridor consume a similar but slightly more diverse diet, and consume meat an average of once a month. Surplus and commercial farmers have a varied diet including all the food groups; however, they seem to still have a low consumption of milk (WFP and FAO, 2010). During the field visit, many interviewees stated that lactose intolerance is common in Guatemala because traditionally, dairy products have not been common in their diet.

I.iii. Household Economy

I.iii.i. Income Sources

Opportunities for income generation are limited among the poor and extremely poor, who cannot easily find paid labor positions (WFP and FAO, 2010). According to a 2007/08 study, among different socio-economic groups, women face the highest rate of unemployment and underemployment, followed by the indigenous population and the rural population, respectively (UNDP, 2007/2008).

Small and medium-scale producers source the majority of their income and staple foods from agricultural labor, and some work on commercial sugar, coffee, melon, or tobacco farms. Temporary migration to other parts of the country (or to neighboring countries) to work on coffee, banana, or sugar farms, is common, especially for family members of subsistence households (WFP and FAO, 2010). In 2010, the estimated Guatemalan population residing outside of the country was 1,637,119 people (Unicef/IOM, 2011), and the annual number of

people who journeyed outside of the country in search of better opportunities averaged 44,440 (from 2002-2010). The rate of emigration has been gradually increasing, from 10.5 percent in 2002, to 11.4 percent in 2010 (Unicef/IOM, 2011).

Poorer households have fewer livestock to serve as additional income; whereas surplus producer households have cattle herds as large as 35 heads (in addition to 30 to 50 small stock animals), poorer households usually have one or two hogs, and 12 to 20 chickens. Households in the "Dry Corridor" hold even less livestock, with an average of four to 14 chickens per household (WFP and FAO, 2010). Fractured and very small landholdings, especially those on mountainous terrain, are not conducive to rearing livestock.

Guatemala is the 10th-top country receiving remittances, worldwide (World Bank, 2011). Remittances for 2010 totaled US\$4.3 billion, the third-largest volume of remittances received worldwide (World Bank, 2011). Internal and international remittances represent a portion of income for 4,510,290 Guatemalans (Unicef/IOM, 2011). Remittances grew an average of six percent annually, from 2001 to 2010, with a slight decrease in 2009 due to the global financial crisis. Remittances rose again in 2010, but appear to have decreased for 2011; in July 2011, US\$349.83 million in remittances came into Guatemala, which is about US\$35 million less than in July 2010 (Publinews, 2011). Almost all (97 percent) of remittances to Guatemala come from the US; the most common US source states are California, New York, Florida, and Texas (Unicef/IOM, 2011). The population of people receiving remittances is most highly concentrated in the department of Guatemala, followed by San Marcos, Huehuetenango, and Quetzaltenango. More women than men receive remittances, and the indigenous population only accounts for 14 percent of those receiving remittances (Unicef/IOM, 2011). Slightly more than half (60 percent) of remittance recipients are categorized as "not economically active," and 40 percent are "economically active" (Unicef/IOM, 2011). Of those who receive remittances and have an occupation, the most common fields of work are: commercial, hotel, and restaurant (26.7 percent), agriculture, forestry, and fishing (18.5 percent), and industry (14.1 percent) (Unicef/IOM, 2011).

I.iii.ii. Expenditure Patterns

Food expenditure accounts for the highest percentage of the household budget (USDA and CBS, 2004). According to a USDA study, this percentage differs among urban populations (who spend 32 percent of their income on food) and rural populations (who spend 47 percent of their income on food) (USDA and CBS, 2004). The study reports the average percent of household income (urban and rural) spent on rent, water, and electricity at 22 percent, followed by transportation/communication (8 percent), health (7 percent), shoes/clothing (7 percent), and, lastly, education (3 percent). Regarding household budgets, the BEST team heard multiple reports of beneficiaries who prioritized cell phones and cell phone minutes over purchasing nutritious food and/or health services.

Basic Food Basket

The "basic food basket" is a measurement based on a group of foods, in sufficient quantities to satisfy the caloric needs of an average household. According to the National Institute of Statistics for the Government of Guatemala (GoG), this measurement represents a minimal daily need based on reference households, but it is by no means a totally sufficient diet with all the nutritional needs². From fall 2010 into 2011, the basic food basket has been increasing. In general, price increases negatively affect households who need to purchase food, which in Guatemala affect both urban and farm households because they are net food buyers. From 2010, the basic food basket cost have increased by more than 10 percent inter-annually which likely results in more household poverty due to limited purchasing power.³

Table 3. Basic Food Basket

Year	Month	Daily Cost	Monthly Cost	Monthly Variation	Inter-annual Variation
2008	January	56.17	1,684.97	1.35	10.96
2008	February	55.91	1,677.24	-0.46	10.92
2008	March	58.18	1,745.25	4.06	13.87
2008	April	59.20	1,776.01	1.76	16.25
2008	May	60.57	1,817.03	2.31	20.08
2008	June	62.43	1,872.84	3.07	22.77
2008	July	64.64	1,939.05	3.54	23.35
2008	August	65.24	1,954.66	0.80	21.16
2008	September	64.73	1,939.21	-0.79	17.94
2008	October	65.27	1,958.08	0.97	20.01
2008	November	65.82	1,974.71	0.85	17.46
2008	December	65.87	1,976.05	0.07	18.85
2009	January	66.30	1,989.11	0.66	18.05
2009	February	65.94	1,978.10	-0.55	17.94
2009	March	65.89	1,976.78	-0.07	13.27
2009	April	65.60	1,968.06	-0.44	10.81

² The basic food basket is not an ideal diet and should not be used as an instrument for nutrition education, nor for establishing food necessities.

³ According to Robles and Keefe (2011) the 2007–08 food-price crisis negatively affected 96.4 percent of households and resulted in a 1.1 percent increase in the national poverty rate. Households lose approximately 2.3 percent of their purchasing power. The total welfare loss for all households in Guatemala was nearly 2 percent of national aggregate expenditure (Robles & Keefe, 2011).

Year	Month	Daily Cost	Monthly Cost	Monthly Variation	Inter-annual Variation
2009	May	65.08	1,952.53	-0.79	7.46
2009	June	65.17	1,955.24	0.14	4.40
2009	July	65.27	1,958.04	0.14	0.98
2009	August	64.68	1,940.27	-0.91	-0.74
2009	September	65.08	1,952.26	0.62	0.67
2009	October	65.06	1,951.81	-0.02	-0.32
2009	November	63.91	1,917.34	-1.77	-2.91
2009	December	63.24	1,897.32	-1.04	-3.98
2010	January	64.61	1,938.27	2.16	-2.56
2010	February	65.17	1,955.05	0.87	-1.17
2010	March	66.80	2,003.89	2.50	1.37
2010	April	66.54	1,996.13	-0.39	1.43
2010	May	66.42	1,992.63	-0.18	2.05
2010	June	67.49	2,024.70	1.61	3.55
2010	July	67.82	2,034.60	0.49	3.91
2010	August	67.24	2,017.20	-0.86	3.96
2010	September	67.67	2,030.10	0.64	3.99
2010	October	69.64	2,089.20	2.91	7.04
2010	November	71.28	2,138.40	2.35	11.53
2010	December	71.64	2,149.20	0.51	13.28
2011	January	72.42	2,172.60	1.09	12.09
2011	February	72.91	2,187.30	0.68	11.88
2011	March	74.16	2,224.80	1.71	11.02

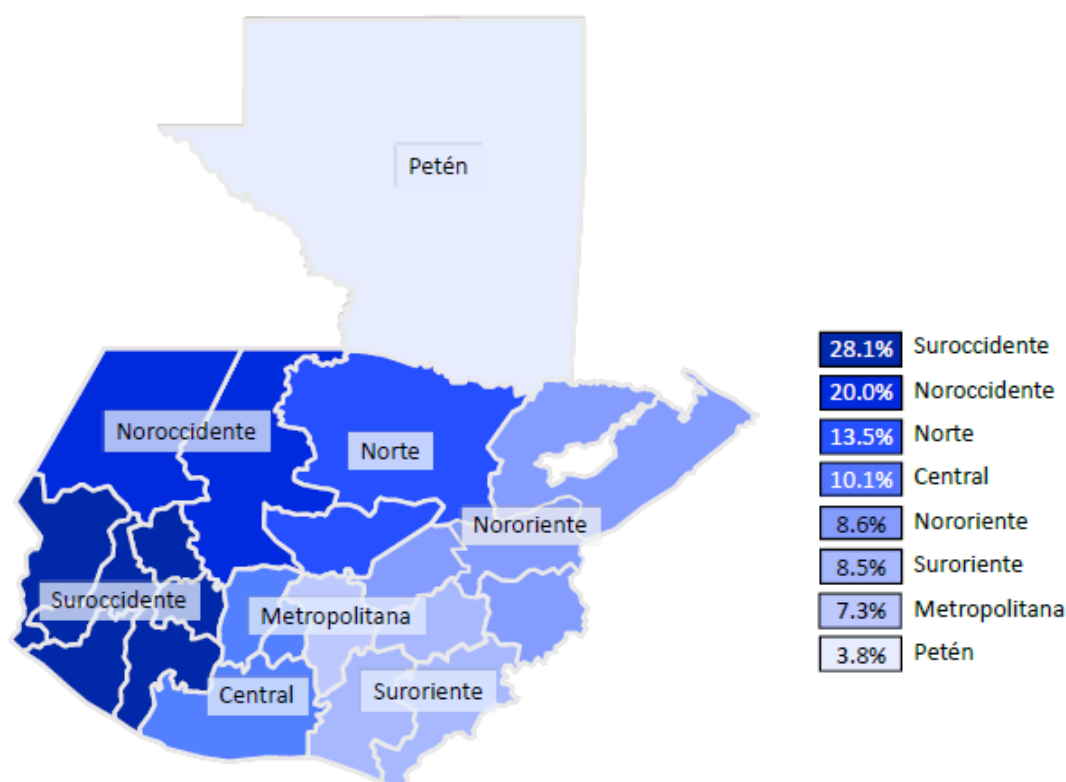
Source: National Statistics Institute, (INE, Instituto Nacional de Estadística), <http://www.ine.gob.gt/np/CBA/index.htm>

I.iv. Poverty

Slightly over half of Guatemala's population is classified as poor, and 15 percent is classified as extremely poor (WFP and FAO, 2010) (INE, 2006). Whereas total poverty decreased by five percent from 2000 to 2006, extreme poverty decreased by less than one percent during the

same period (INE, 2006). The average monthly value of extremely poor households amounts to about US\$20.25, and the average monthly value of poor households amounts to US\$45.95 (INE, 2006).⁴ Figure 1 shows the geographic distribution of poverty in Guatemala.

Figure 1. Regional Distribution of General Poverty



Source: INE, 2006. ENCOVI Livelihoods Survey.

When comparing the three main sectors of agriculture, industry, and commercial/services, agriculture shows the highest percentage of workers who are poor (75 percent). The industry sector has a 43 percent poverty rate and the commercial/services sector has a 25 percent rate. Not surprisingly, when comparing the formal and informal sector, the informal sector shows a much higher (55 percent) rate of poverty than the formal (23 percent) (INE, 2006).

Rural households account for 52 percent of Guatemala's population (World Bank, 2008), a decrease from 56 percent in 2000. Seventy-one percent of the country's rural population is in poverty, as opposed to 31 percent of the urban population (World Bank, 2008). Of the country's total poor population, 56 percent of households are engaged in farming; of the country's total rural poor population, 72 percent of households are engaged in farming.

Poverty is also correlated with gender, and strongly correlated with ethnicity. Women accounted for 52 percent of the poor population in 2006 (INE, 2006); however, of women-headed households, only 31 percent were classified as poor. Of male-headed households, 43 percent

⁴ Conversion of GTQ 264 and GTQ 540, based on 1 GTQ = 0.127657 USD (www.xe.com, August 24, 2011).

were classified as poor (INE, 2006). Indigenous people account for 56 percent of the total poor population, and only account for 19 percent of the non-poor population (INE, 2006).

Annex II. Food Security

Data. This Annex is largely based on the FAO/WFP 2010 Crop and Food Security Assessment Mission (CFSAM), the most recent, available, and thorough food security assessment in Guatemala. The Annex is also informed by the Government of Guatemala (GoG) 2006 National Survey of Livelihoods, FEWS NET's 2007 Livelihood Profiles Report, FEWS NET food security updates and outlooks, as well as other sources which are either not comprehensive in regard to country-wide food security, or dated to the extent that much of their information is likely no longer accurate. In the absence of very recent, very thorough sources, this Annex proceeds to present the most accurate, current, overview of food security as possible given limited resources.

II.i. Livelihood Zones

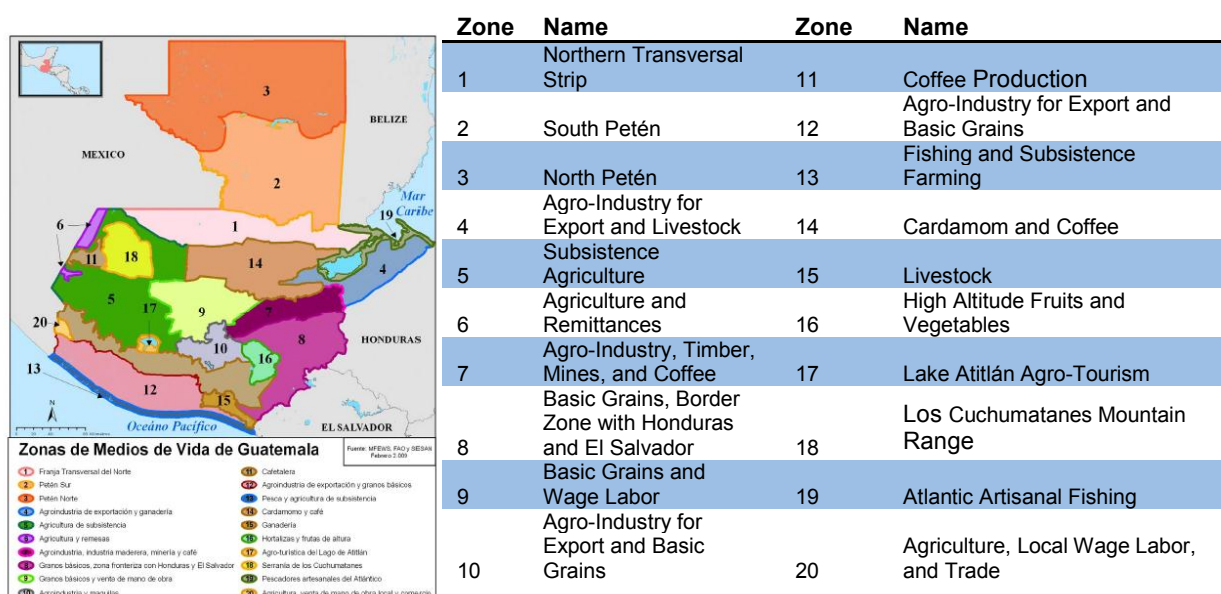
II.i.i. Introduction

Guatemala has 20 livelihood zones, listed in Figure 2.⁵

In 2007, over half (55 percent) of the population lived in rural areas, which are more prone to infant mortality, chronic malnutrition, and have access to limited basic goods and services (FEWS NET, 2007). The most food insecure areas of the country are the northwest and the dry corridor (according to the CFSAM (FAO/WFP, 2010) the dry corridor consists of Jutiapa, Jalapa, Zacapa, Chiquimula, El Progreso, Quiché and Baja Verapaz departments) (USAID, 2010). The highest percentage of subsistence and semi-subsistence farmers lives near the western highland mountainsides, the semiarid region, and some northern areas (WFP and FAO, 2010). Guatemala is culturally and geographically diverse. The population includes three main indigenous groups (Maya, Xinka, and Garífuna) and over 20 different languages.

⁵ The livelihood zones were designed by FEWS NET; unfortunately, the 2007 is reported to be slightly outdated as of August 2011.

Figure 2. Livelihood Zones



Source: FEWS NET, 2007

Table 4. Livelihood Overview

Zone	Climate	Main sources of labor/food for the poorest households
1	Warm/mild, variable, dry and rainy season, annual precipitation 2,000 mm	Agricultural labor 50% purchase
2	Warm, dry/hot in August, annual precipitation 3,000 mm	Agricultural labor Maize production, bean purchase
3	Warm, dry/hot in August, annual precipitation 3,000 mm	Agricultural labor (no data on food supply)
4	Warm/mild, humid, annual precipitation 1,800-2,500 mm	Agricultural labor 60% purchase
5	Highly variable, annual precipitation 1,000 mm-2,000 mm	Agricultural labor 90% purchase
6	Warm, annual precipitation 750-1,224 mm	Unskilled, non-agricultural labor 100% purchase
7	Variable, irregular rainfall	Agricultural labor 65% purchase
8	Mild, some drought, annual rainfall 2,200 mm	Agricultural labor 72% purchase
9	Warm, variable, with lower precipitation (600-700 mm) in central/southern areas, and higher (1,500-1,999 mm) in the north	Agricultural labor 79% purchase
10	Warm, variable, with rainy and dry season, annual rainfall 800-1,500 mm	Unskilled labor (no data on food supply)
11	Warm, with rainy and dry season, annual rainfall in southern area: 2,500-4,000 mm; northern area: 1,000-1,500 mm	Agricultural labor 100% purchase
12	Warm, dry/hot July and August	Agricultural labor 100% purchase
13	Warm, humid, annual precipitation 1,000-1,500 mm	Agricultural labor 80% purchase
14	Cool, annual precipitation 2,000 mm	Agricultural labor

Zone	Climate	Main sources of labor/food for the poorest households
		Maize: 20% purchase Beans: 65% purchase Agricultural labor and livestock
15	Warm, annual precipitation 500-1,000 mm	Agricultural labor 90% purchase
16	Cool, mild	95% purchase
17	Mild, variable, annual precipitation 1,000-1,100 mm	Agricultural labor 73% purchase
18	Mild, cool, annual precipitation 1,000-2,000 mm, with higher precipitation in high-altitude areas	Fishing 50% purchase
19	Mild, humid, annual precipitation 1,800-2,500 mm	Agricultural labor 95% purchase
20	Warm, dry and rainy season	

Source: FEWS NET Livelihoods Report, 2007

The country's dry corridor departments fall in Livelihood Zones 8 (staple food border with Honduras and El Salvador), Zone 11 (coffee), Zone 16 (high altitude vegetables and fruits), Zone 7 (agro-industry, mining and coffee zone), and Zone 9 (staple food and sale of manual labor). The area is characterized by periods of drought and erratic rains during the winter (May through October) and animal/plant disease. Much of the soil in the area has been degraded, and households cultivate low yields in the western area's hillside terrain (WFP and FAO, 2010) and southern area's coastal sections.

In the northwest region, departments with the highest rate of poverty and malnutrition include San Marcos, Huehuetenango, Quiché, and Alta Verapaz (USAID, 2010). These regions fall largely under Livelihood Zone 5 (highland and vegetables), Zone 6 (commercial border with Mexico), and Zone 1 (northern transversal strip).

II.ii. Latest Food Security Assessments

This section covers the findings and study details of the Red Cross Rapid Food Security Assessment (published in March 2010) and the WFP/FAO CFSAM (published in February 2010). The section is also informed by latest FEWS NET publications, and the BEST July-August 2011 field visit.

II.ii.i. Food Security Overview

In 2009-2010, low rains affected the Guatemala's southwestern departments, as well as Alta Verapaz (WFP and FAO, 2010). Still, country-wide harvests for the 2009/2010 season were higher than the previous year's, due to well-distributed rains elsewhere in the country. FAO/WFP estimated that 145,400 households whose crops had suffered due to low rainfall would need food assistance in 2010 (WFP and FAO, 2010). In September of 2009, the Guatemalan President declared a state of emergency due to drought and high food and fuel prices.

Guatemala's food security outlook has improved since 2010, but some areas are still recovering from the previous year's reduced stock, as well as increasing prices for maize. The poor harvest

of 2010 sparked an early onset of the 2011 lean season by two months.⁶ However, the late-August harvest for 2011 has not been affected by weather hazards, and good yields of maize and beans are expected (FEWS NET, 2011). In response to high maize prices (which are detailed in sections I.ii.i and I.ii), farmers have increased the amount of land dedicated to maize. With expected good yields for this first 2011 harvest, most households will be able to maximize self-consumption and reduce market purchase (FEWS NET, 2011). However, high maize prices will significantly impact households in the highlands, as this area does not experience an August/September harvest.

Other factors impacting food security this year include increased prices for fuel (which in turn impact prices for both local and imported foods), and decreased informal trade from Mexico (which reduces market supply) (FEWS NET, 2011).⁷ Government provision of inputs and fertilizer is expected to fall according to a reduced budget for the Ministry of Agriculture (MAGA, –Ministerio de Agricultura, Ganadería y Alimentación”) (FEWS NET, 2011).

As of August 2011, the following areas are classified as –stressed” regarding food security: central and eastern Huehuetenango, eastern parts of San Marcos and Quetzaltenango, the southern coastal areas, and some parts of Zacapa and El Progreso. Areas categorized as –crisis” include: parts of El Progreso and Zacapa, southern and northeastern Huehuetenango, and northeastern San Marcos. No areas are categorized as –emergency” or –catastrophe/famine (FEWS NET, 2011).” FEWS NET food security forecasts for the rest of 2011 are generally in accordance with this current snapshot, though decreased improved levels of food security in Zacapa and El Progreso are expected for October through December.

II.ii.ii. Study Details

Red Cross' Rapid Food Security Assessment, March 2010. The International Federation of the Red Cross' Disaster Relief Emergency Fund sponsored the Guatemalan Red Cross to conduct food security assessments in Jalapa, Chiquimula, and Izabal, in late 2009 and early 2010. The study covered 2,053 families in 21 communities. The aim of the study is to assess the food security situation at the current time, after a series of droughts and floods rendered 2008/2009 harvests poor. The study team examined nutrition patterns, food intake, sources of food, and income-generating activities of the communities.

WFP/FAO CFSAM, February 2010. In November 2009, WFP and FAO, with assistance from the GoG, undertook a study to assess production of basic grains (maize, beans, rice) in Guatemala's dry corridor and eastern region. The study included interviews and focus groups with community leaders, government officials, and other key informants. Topics discussed included climatic events, prices, livestock health, crop/animal disease, household food security, household resources, income-generating services, input availability, and basic services availability.

⁶ FEWS rain July 2011

⁷ Decreases in informal imports from Mexico is expected because of increased border control and poor weather in Mexico.

II.ii.iii. Findings

Food security overview. The following factors challenge the establishment of livelihoods in Guatemala: 1) high food costs; 2) inadequate access to assets (land, credit, education, housing, goods, basic services); 3) limited incomes (due to a history of poor health and nutrition, and limited labor opportunities,); and 4) inadequate dietary and child care practices (due to low calorie consumption and a limited variety of foods). Food insecurity in most regions is critical from April to August (between the March and September harvests) (WFP and FAO, 2010).

Table 5. Food Insecure Households by Livelihood Zone, 2009

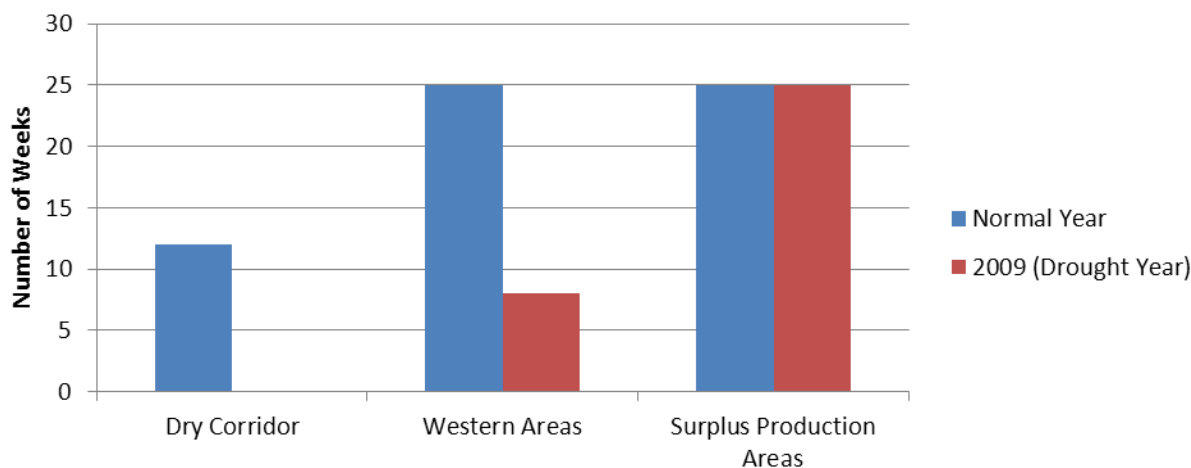
Department	# of HH affected by DT 16 ⁸	# of HH affected by irregular rains	# HH severely food insecure	# of HH moderately food insecure	Total # HH food insecure
Alta Verapaz	7,635	---	840	2,886	3,726
Baja Verapaz	---	45,104	5,413	9,021	14,433
Chiquimula	---	37,972	6,076	15,189	21,264
El Progreso	---	23,346	2,568	3,502	6,070
Izabal	8,806	66,634	4,465	16,975	21,440
Jalapa	---	60,351	12,070	12,674	24,744
Jutiapa	---	44,965	10,792	13,040	23,831
Petén	7,186	---	417	1,516	1,933
Quiché	2,440	33,489	1,479	5,428	6,906
Santa Rosa	---	52,360	3,142	7,330	10,472
Zacapa	---	36,338	3,634	6,904	10,538
Total	26,067	400,559	50,893	94,465	145,358

Source: FEWS NET, as cited in FAO/WFP CFSAM

Food supply and access. Supply of and access to food is impacted by factors such as ability to store food, access to transport, access to markets, and access to finance. The July-August 2011 BEST field visit revealed that physical market access is not a major constraint to food security; limited purchasing power and ability to store food are far more common limitations. Extremely poor and poor households depend on market purchase (in addition to own production) for food supply to varying degrees; as noted in Annex I, the minimum wage barely covers half of the price of the basic food basket in Guatemala. The WFP/FAO CFSAM of 2010 noted vulnerable households' lack of food reserves as one of its most important findings. In the dry corridor, for example, poor 2009 harvests left most producer households without any reserved stocks for 2010 (WFP and FAO, 2010). Coping mechanisms listed include the limitation of meal size/quantity, limitation of food variety, migration to other cities for work, sale of smallstock, limitation of input use, and seeking help from organizations. Poor households have limited space to store food and only eight percent of poor households have refrigerators.⁹

⁸ Tropical Depression 16 that turned into Tropical Storm Nicole, October 2008.

⁹ ENCOVI 2006

Figure 3. Household Food Reserves Among Production Areas

Source: WFP/FAO, 2010 CFSAM

In some areas of the dry corridor, physical market access is relatively more limited; a household may have to walk up to one hour to the market (WFP and FAO, 2010), and heavy rains sometimes cause delays on secondary roads. However, as noted throughout this report, access to finance, not geographic access to market, appears to be the main threat to food security in most areas.

Weather and hazards. According to the GoG, an estimated 54,000 families live in areas prone to extreme weather conditions (Red Cross, 2010). In 2010, producers stated that the main cause of reduced yields and low herd counts were climatic effects (such as irregular rains and tropical storms) (WFP and FAO, 2010). Potential climatic shocks for Guatemala include: 1) earthquakes, such as the one in 1976, which resulted in over 23,000 deaths; 2) tropical storms such as the hurricanes in 2005 and 1998, and the recent tropical depression in 2008; 3) landslides; 4) drought, such as the ones in 2001 and 2009; and 4) volcanic eruptions (Afifi, 2010). Drought is the largest problem in the country's dry corridor, which has suffered from sporadic droughts over the past 30 years (WFP and FAO, 2010).

This year, rains fell slightly short from March to June, but returned to normal levels in July (FEWS NET, 2011).

Income and prices. Increasing prices reduces purchasing power, which in turn impacts food security. The price of the basic food basket and the price of the basic vital basket in Guatemala both rose about 30 percent from 2006 to 2009, whereas average farm wages only rose 21 percent (WFP and FAO, 2010). Note that maize accounts for six percent of the total food basket. Farmers struggled to purchase inputs and improved seeds in 2010, as the price of these goods rose to a greater extent than the price of maize (WFP and FAO, 2010).¹⁰

¹⁰ Note that the share of basic grain consumption is 71 percent for maize (Janvry, 2009), this is different from the share of the total food basket cost. According to the Guatemalan Ministry of Economy, just tortilla purchases are around 2 percent of total expenditure on food by an average urban household (Ministerio de Economía de Guatemala, 2011)

The prices of locally-produced maize and beans rise and fall according to seasonality, as detailed below. Prices are lowest right after harvest (August-September, for northern and eastern areas first harvest; November and December, for eastern area second harvest; March for northern area second harvest). Prices for beans are more stable than prices for maize, due to imports (including informal imports from Mexico).

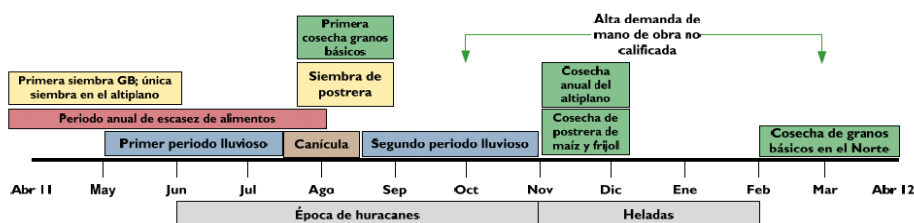
Maize prices in 2011 are about 30 percent higher than the past five-year average, with the sharpest increases in the highland area (FEWS NET, 2011). Beans prices have risen by about 10 percent. The causes behind the increase in price for white maize can be attributed to a number of factors noted by interviewees in the 2011 BEST field visit, such as: 1) high international staple food prices; 2) increasing fuel prices; 3) increased costs of security; 4) increased costs of inputs; 5) shortage of stock after low 2009 harvests; 6) high internal transport costs; 7) decrease in contraband maize from Mexico; 8) animal feed industry using white maize for feed; 9) traders speculation; and 10) prices never recovered from 2008 global financial crisis. For a thorough price analysis, including seasonality, see section II.iii.

Recommendations. The WFP/FAO CFSAM made the following recommendations to improve food security in 2010: 1) improve and expand availability of malnutrition treatment and prevention programs, especially in the dry corridor; 2) improve and expand programs increasing health and food security of pregnant and lactating women; 3) implement community crisis-response, prevention, and alert programs; 4) improve targeting of food security programs, especially FFW, and emphasize the role of both (not just one) parent in the household; 5) promote and educate communities on general nutrition and food security, as well as promote and educate livelihood improvement and re-establishment after crises.

II.iii. Seasonality and Prices

In general, Guatemala has two production seasons. The first planting begins in April and May, and is harvested in August and September. The second planting begins in September, and is harvested in November and December. The dry season occurs from November to April, and the rainy season occurs from May to October. An exception to this seasonal timeline is the country's western highlands region, which only experiences a single annual harvest in November and December. See the following figure for Guatemala's seasonal timeline.

Figure 4. Guatemala Seasonal Timeline



Source: FEWS NET

In the case of maize, in warm zones there are two periods; the first period start with planting in May and June, followed by harvesting in August and September. The second period starts with

planting from August to September and harvesting from November to December. In the highland region, planting is from March to April and harvesting happens in November and December.

In the Northern and Southern regions, the first planting occurs in May and harvest in October. The second planting is in November with harvest in February and March. Usually, the price of yellow maize is slightly higher than white maize, and the two rise and fall together. In general, for both types of maize, prices are lowest in December, and highest in September (WFP and FAO, 2010).

Rice prices tend to be lower in times of excess supply from September to January, if normal conditions allow for a good harvest. From February to August, prices tend to slightly increase once imported and stored rice volumes tend to be lower (ARROZGUA, 2011)

Dry beans also have two seasons; the first starts mid-February until May and the second from mid-August to December (Salazar, 2011). Prices also tend to follow this seasonal variation, with highest prices observed in June, July and August and also December and January (Salazar, 2011).

Besides production seasonality, local markets play an important role for food security in Guatemala. Large and small scale farm households rely heavily on the market, and are mostly vulnerable to local price shocks. De Janvry and Sadoulet (2009) found that while during the global food crisis (i.e., 2005-2008 food price increase), there was no transmission of international into domestic prices in Guatemala, given farm household's high food dependency (even large scale farms) most farmers lost when prices rose, particularly marginal, small, and medium farmers. Furthermore, farmers represented two-thirds of all houses that lost during the food price crisis (Janvry, 2009).

Seasonality of labor is another factor which impacts food security in Guatemala. To increase income, many household members migrate to coffee, tobacco, cantaloupe, and sugar plantations for some part of the year (generally October through December) (WFP and FAO, 2010).

II.iv. Price Analysis

This section includes an analysis of nominal monthly consumer prices for five main regions in Guatemala¹¹ (Figure 5):

- Guatemala city "La Terminal" wholesale market is the most important market in the country. Prices for basic grains (e.g., rice, black beans and maize), milk, and oil are reported in this market
- East region comprises the departments of Jalapa, Jutiapa, Santa Rosa, Chiquimula, El Progreso, Izabal, and Zacapa
- North region includes Alta Verapaz, and Baja Verapaz departments

¹¹ This regional division was based on field visits and the Ministry of Agriculture (MAGA) available price information

- Central region includes Chimaltenango, Escuintla, and Sacatepéquez departments
- Petén department
- West includes the departments of Quetzaltenango, Retalhuleu, San Marcos, Sololá, Suchitepéquez, Totonicapán, Quiché and Huehuetenango

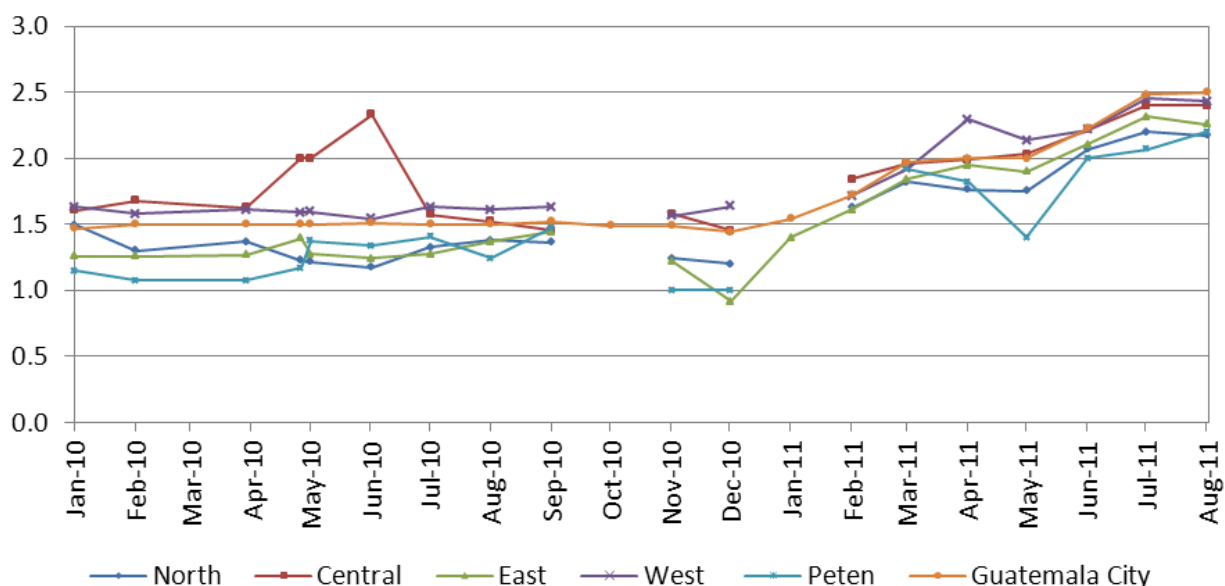
Figure 5. Guatemala Main Regions for Price Analysis



II.iv.i. Basic Grains Price Seasonality

This section includes an overview of price seasonality for basic grains at main regional markets. Basic grains include maize (white and yellow maize), black dry beans and rice with 10% broken grain (rice 90-10). Prices are from the Ministry of Agriculture (MAGA, –Ministerio de Agricultura, Ganadería y Alimentación”).

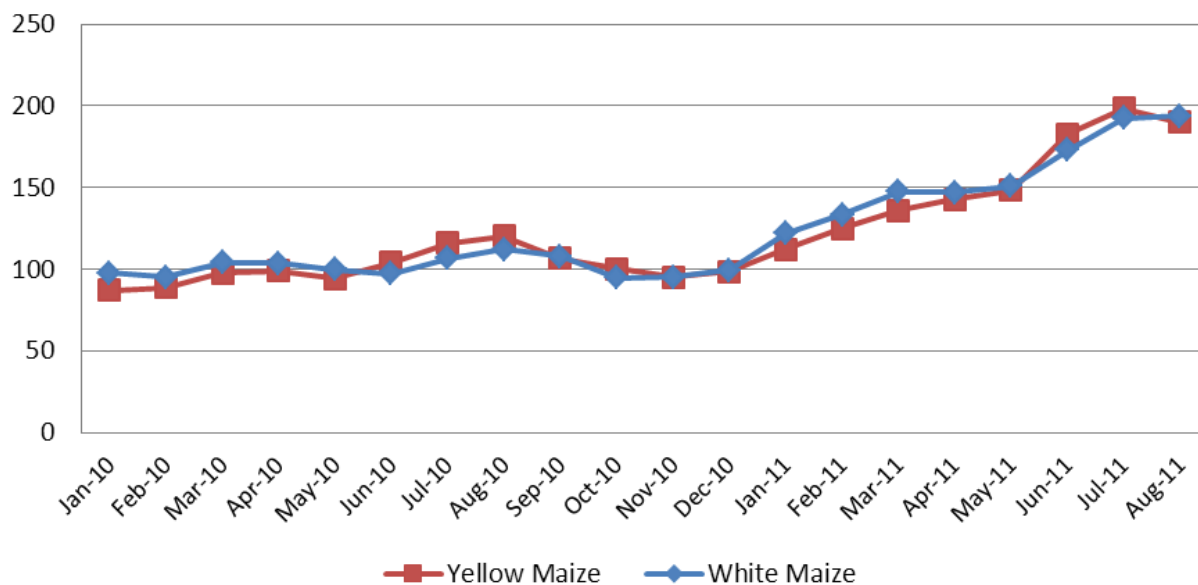
Figure 6. 2010-2011 White Maize Retail Prices by Main Regions (GTQ/lb)



Source: BEST calculation based on MAGA prices

In 2010, white maize retail prices were relatively stable across markets, with the exception of prices in central region, which increased from April to June, and later decreased and remained similar to prices in other regions. In 2011, all markets show steadily increasing prices (Figure 6).

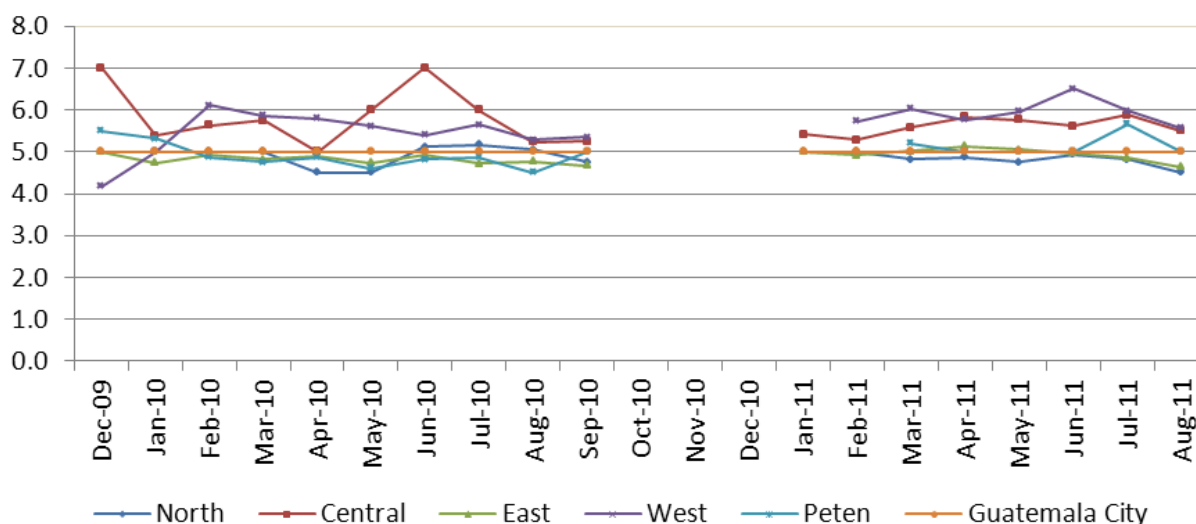
Figure 7. 2010 and 2011 Yellow and White Maize Producer Zone Prices (GTQ/Quintal)



Source: BEST calculation based on MAGA prices

Production zone prices¹² for yellow and white maize¹³ showed slightly more variation than retail prices from June to August 2010, which is consistent with production seasonality variations. However, since December 2010, white and yellow maize prices in production areas progressively increased until August 2011 (Figure 7).

Figure 8. 2010-2011 Black Bean Retail Prices by Main Regions (GTQ/lb)

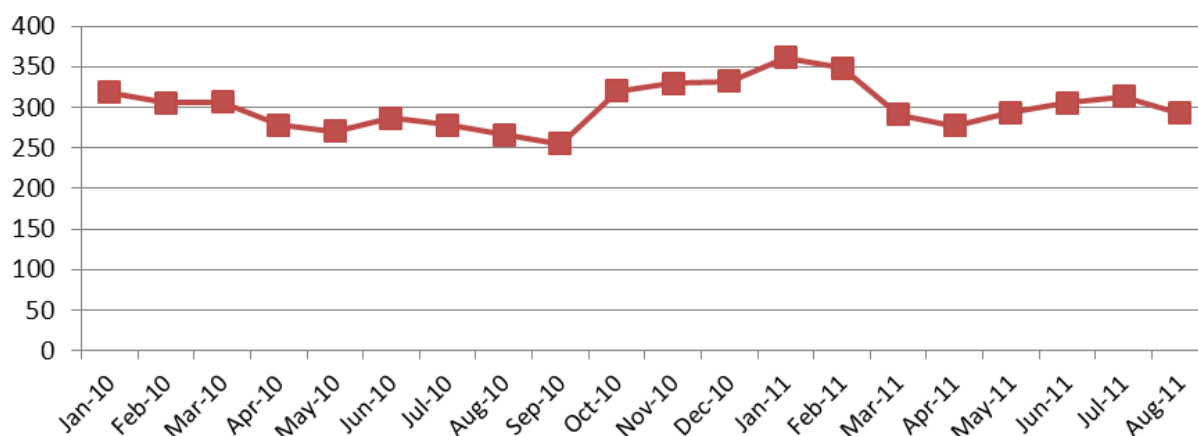


Source: BEST calculation based on MAGA prices

In 2010, black bean retail prices showed some month-to-month variation in certain regions. In the north, prices were relatively stable at the beginning of the year and later slightly varied from March until the end of the year. In the central region, prices showed the most variability in 2010, with prices changing rapidly particularly from April to August. Prices in the east remained relatively unchanged. In the west region, prices increased rapidly until February 2010 then slowly decreased until the end of the year. Petén region also showed very small variation in 2010. Finally, prices in Guatemala City were unchanged from 2010 to August 2011. In 2011, prices in all regions slightly changed reflecting mostly production seasonality (Figure 8).

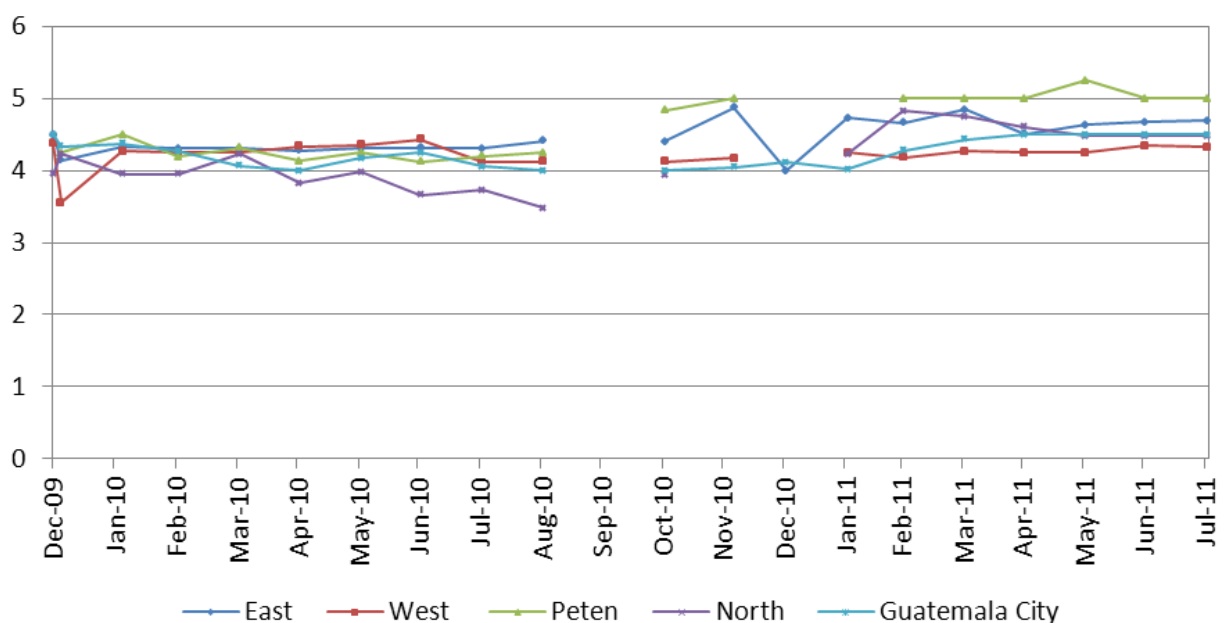
¹² MAGA reports local “acopiador” prices as prices from production zone.

¹³ Production zone for white maize are the north and east, and for yellow maize is the north region.

Figure 9. Average Black Beans Producer Zone Prices (GTQ/Quintal)

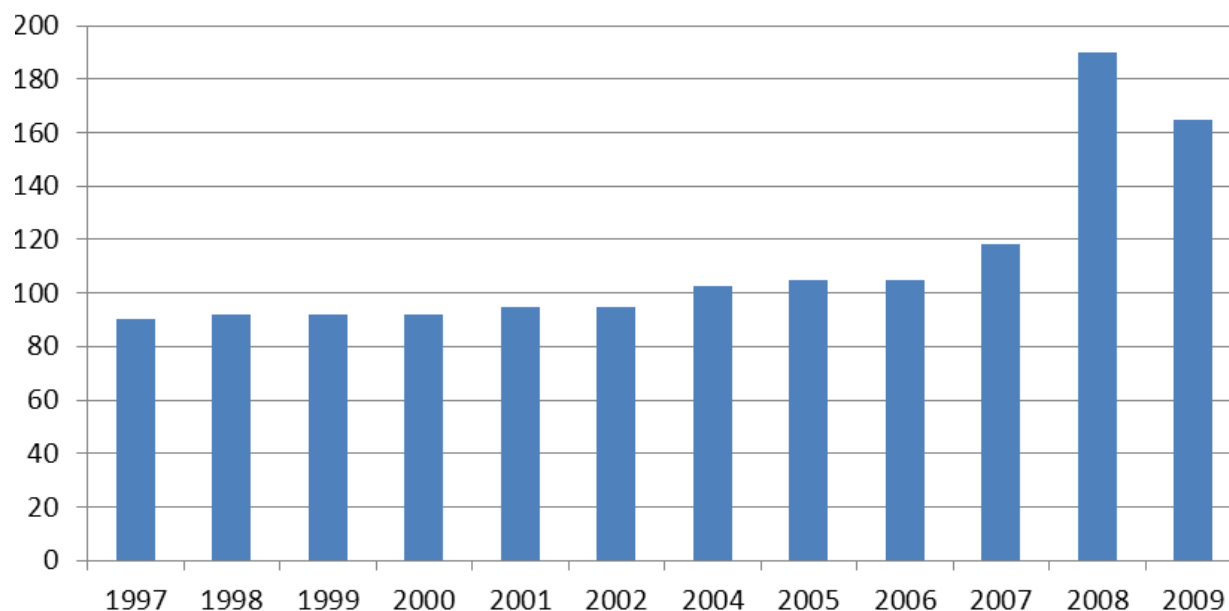
Source: BEST calculation based on MAGA prices

Consistent with dry bean price seasonality, average prices from production zones in the north and east decreased from January 2010 to August 2010. From September 2010 until January 2011, prices remained relatively high corresponding to limited supply period. After January, prices again decreased until April and later slightly increased again until July 2011 (Figure 9)

Figure 10. Rice Retail Prices (GTQ/lb)

Source: BEST calculation based on MAGA prices

Retail prices for rice in the east, west, Petén and Guatemala City were stable until August 2010. During the last part of 2010, prices in different regions showed slightly more variation with an upward tendency. The north region was the only region showing some decreasing trend during 2010. In 2011, while most regions showed very small price changes, for the most part prices were slightly higher than 2010 (Figure 10).

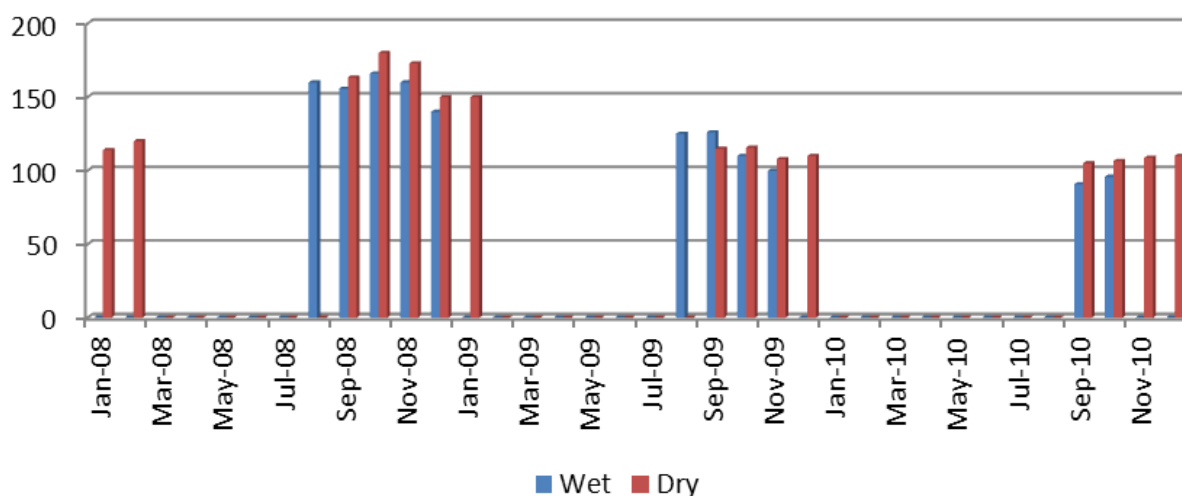
Figure 11. 1997 – 2009 ARROZGUA Average Yearly Producer's Price

Source: (ARROZGUA, 2011)

According to the Guatemalan Rice Association (ARROZGUA), producer prices¹⁴ from 1997 to 2006 remained relatively stable. Since 2007, prices increased rapidly, particularly in 2008 (ARROZGUA, 2011) (Figure 11). During 2007 and 2008, increasing ethanol production displaced rice production in Guatemala, causing a fall in area planted of approximately 50% from the previous year as farmers planted more sugar cane instead of rice to take advantage of more competitive prices (GAIN).

Price information from MAGA, while limited, supports production price trends. Production zone prices for rice paddy delivered wet or dry and sorted increased significantly during harvest time in 2008. By 2009, prices decreased, and in 2010, they returned to lower levels similar to those observed before 2008.

¹⁴ ARROZGUA sets a "Producers Guaranteed Price" at the beginning of each year in agreement with different rice millers in the country. This agreement assures producers who are part of the association to have all their harvest bought by millers participants at an guaranteed floor price (ARROZGUA, 2011).

Figure 12. 2008 – 2010 Rice Paddy Production Zone Prices (GTQ/Quintal)

Source: BEST calculation based on MAGA prices

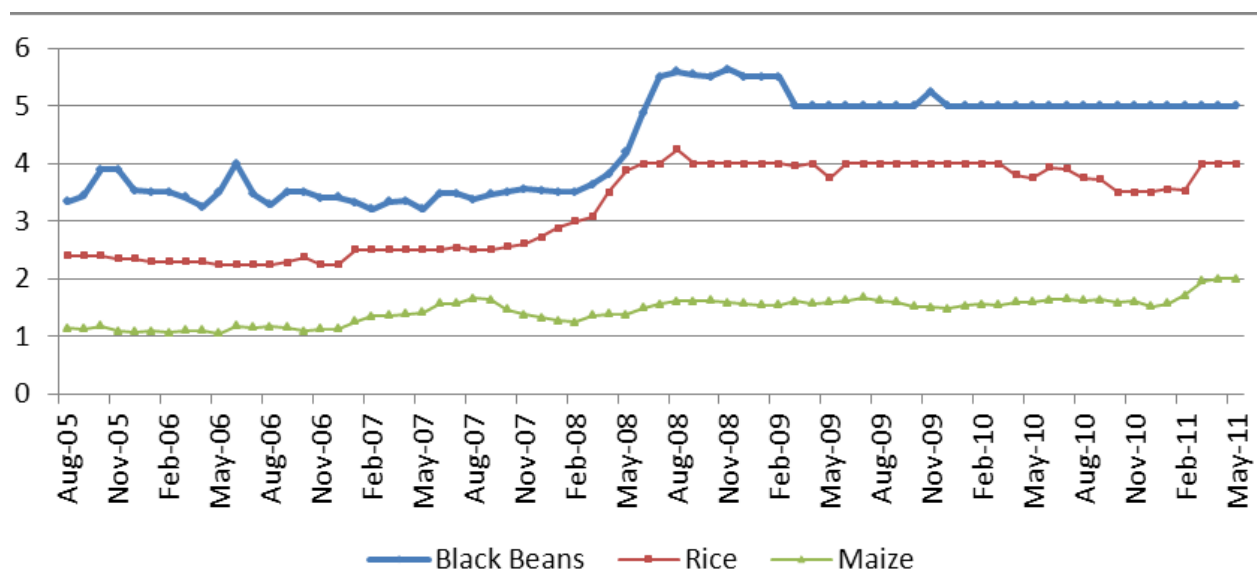
II.iv.ii. Price Changes in Guatemala City – La Terminal Market

As noted above, La Terminal market is the most important distribution center in Guatemala City.¹⁵ MAGA maintains price records for basic grains, milk, and vegetable oil for this market, which are analyzed and presented in this section.

Overall retail price for basic grains in La Terminal have remained relatively stable from August 2005 until August 2007. Black beans showed the most variation from 2005 to 2006. The greatest price increase happened in 2008, when black bean prices jumped from approximately 3.5 GQT/lb to more than 5.5 GQT/lb (a 57% increase) in less than one year's time. Rice prices increased from approximately 2.5 GQT/lb to around 4 GQT/lb (a 60% increase). After 2008, black bean prices decreased again to 5 GQT/lb and rice prices remained at 4 GQT/lb. Maize prices did not show much variation from 2005 to 2010. However, starting 2011, prices have increased considerably in this market (Figure 13).

¹⁵ Calle 21 market is another important wholesale and distribution center in Guatemala City. However, there is no significant price difference between these two markets. Thus, this section only includes prices from La Terminal market.

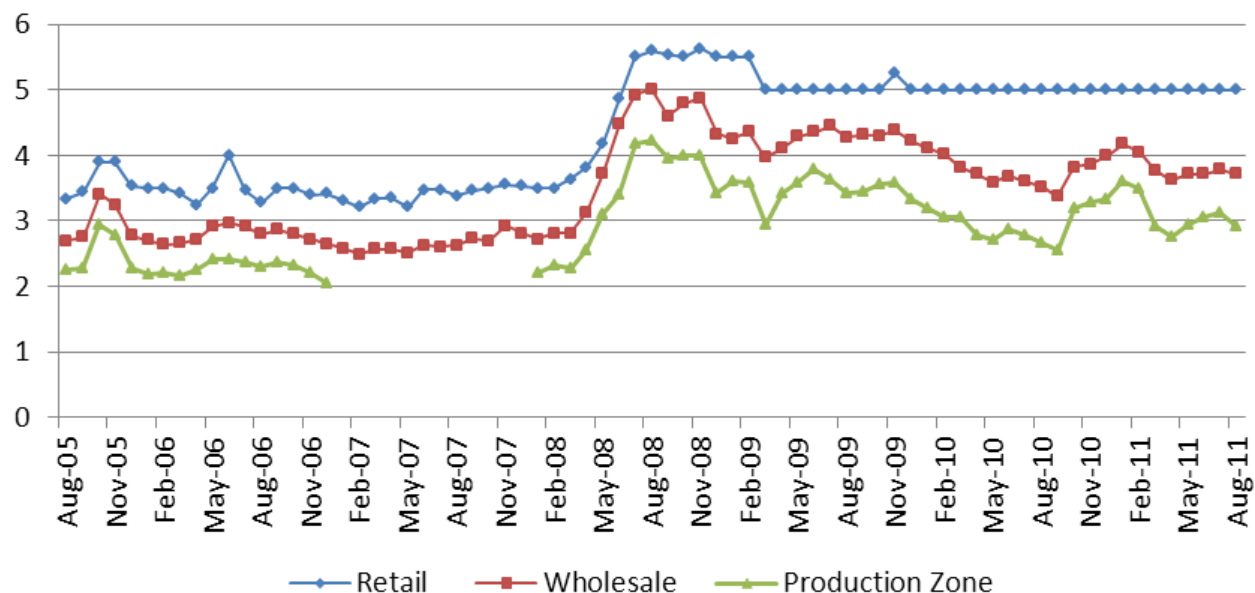
Figure 13. 2005 - 2011 Basic Grains Retail Price Changes – La Terminal Market Guatemala City (GTQ/lb)



Source: BEST calculation based on MAGA prices

Black bean production zone, wholesale and retail prices showed a similar trend from August 2005 until February 2009. In 2008, all three prices increased rapidly and remained relatively high during the year. In 2009, while wholesale and production zone prices showed a markedly downward trend, retail prices remained relatively high and continued unchanged but high until August 2011. Wholesale and production zone prices continued decreasing until August 2010. Both prices varied during the last part of 2010, but remained relatively stable during 2011 (Figure 14).

Figure 14. 2005 - 2011 Black Bean Production Zone, Wholesale and Retail Prices – La Terminal Market Guatemala City (GTQ/lb)



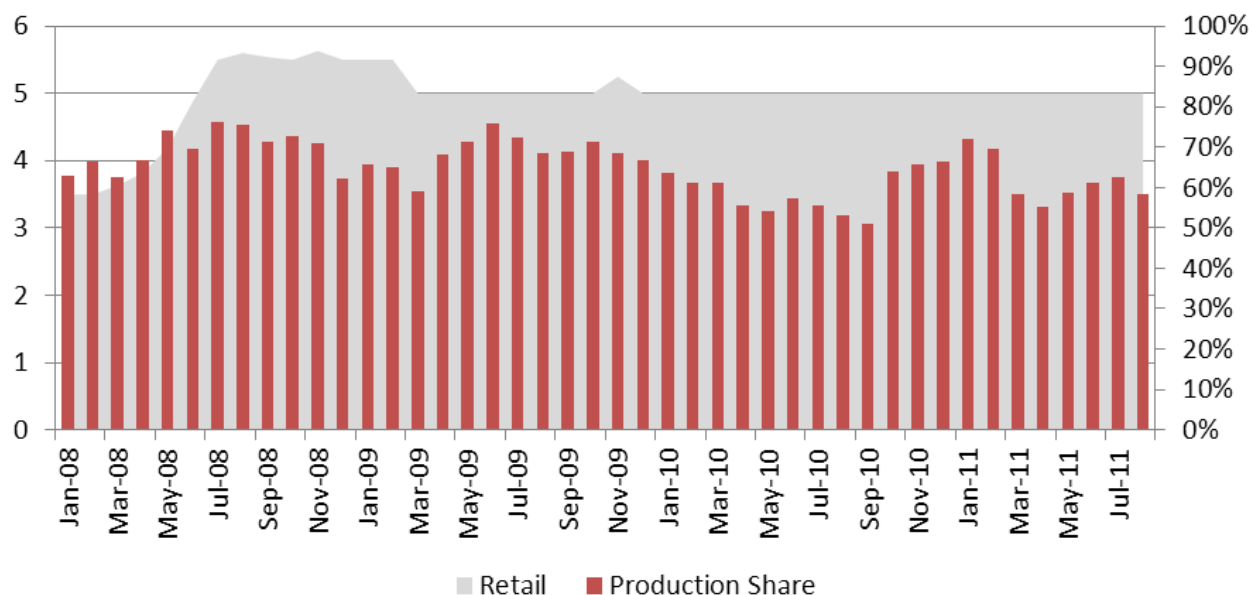
Source: BEST calculation based on MAGA prices

Marketing margins¹⁶ for black beans at La Terminal market have changed over the period 2008 to 2011. Figure 14 shows that while retail prices continuously increased to later remain unchanged, the share of production price changed from about 50 to 60% to more than 70% during the same period.

Price data from 2008 to 2011 suggests that the black bean production zone price share decreased from around 70% of retail prices to around 55% percent in 2008. During the same period, retail prices started an upward trend and reached their highest point in mid-2008. While shares of retail prices continued to be mostly variable in 2009 (from approximately 50% in March to more than 70% in June), retail prices were constant, with a small change in November, but returned to their original levels in December. In 2010, the share of production zone price decreased constantly up until September 2010 and later increased again. In 2011, the percentage share of production price continued to be variable but was generally lower until August 2011 (Figure 15).

¹⁶ The percentage difference between retail prices and production zone prices is considered marketing margins. This share was calculated as the percentage of production zone over retail prices. In general, retail prices include payments for both the raw farm product and activities that occur once the product has moved past the farm gate, such as processing, transportation, wholesaling, and retailing. Thus, this percentage difference can be considered part of marketing margins for retailers. In the case of unprocessed products such as basic grains, it is expected that the retail margin remains relatively unchanged and high.

Figure 15. Black Beans Production Zone Share of Retail Prices – La Terminal Market Guatemala City (GTQ/lb)

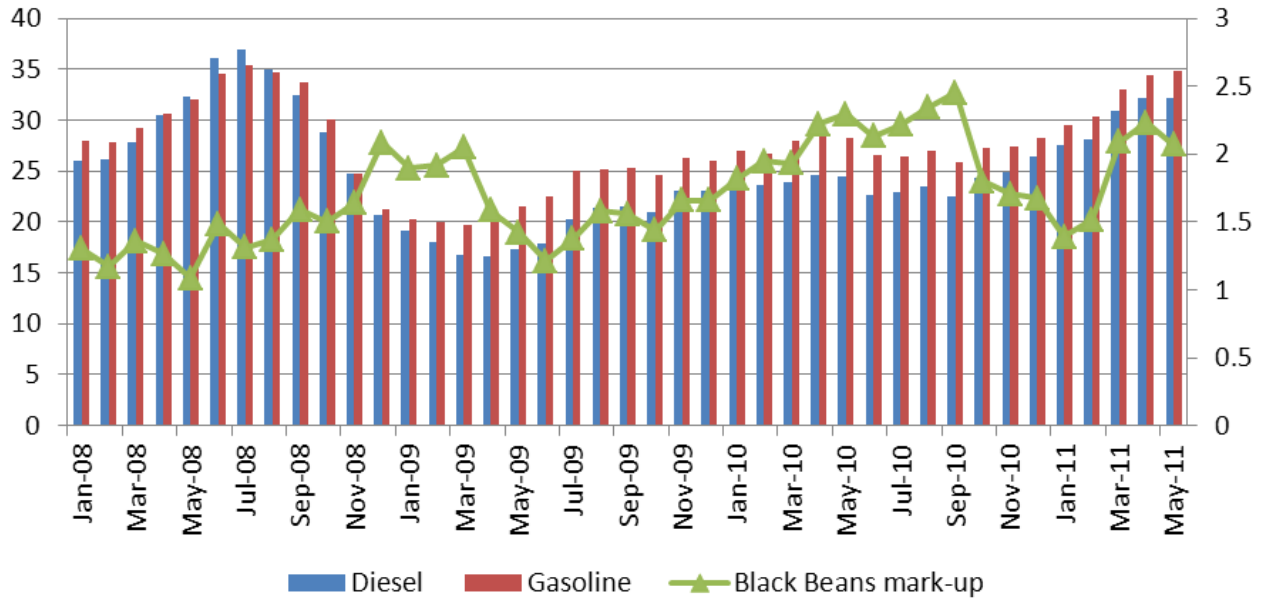


Source: BEST calculation based on MAGA prices

Since marketing margins usually contain transportation costs, in this case, it is assumed that fuel costs represent the bulk of transportation costs. Thus, any change in fuel cost is expected to affect prices. Figure 16 shows that from 2008 and 2011, the difference between production zone prices and retail prices¹⁷ increased relatively similarly to increases in prices of diesel and gasoline, which suggest that retail prices adjusted relatively quickly to changes in fuel prices.

¹⁷ Another way to calculate marketing margins is by taking the difference between retail price and production zone prices.

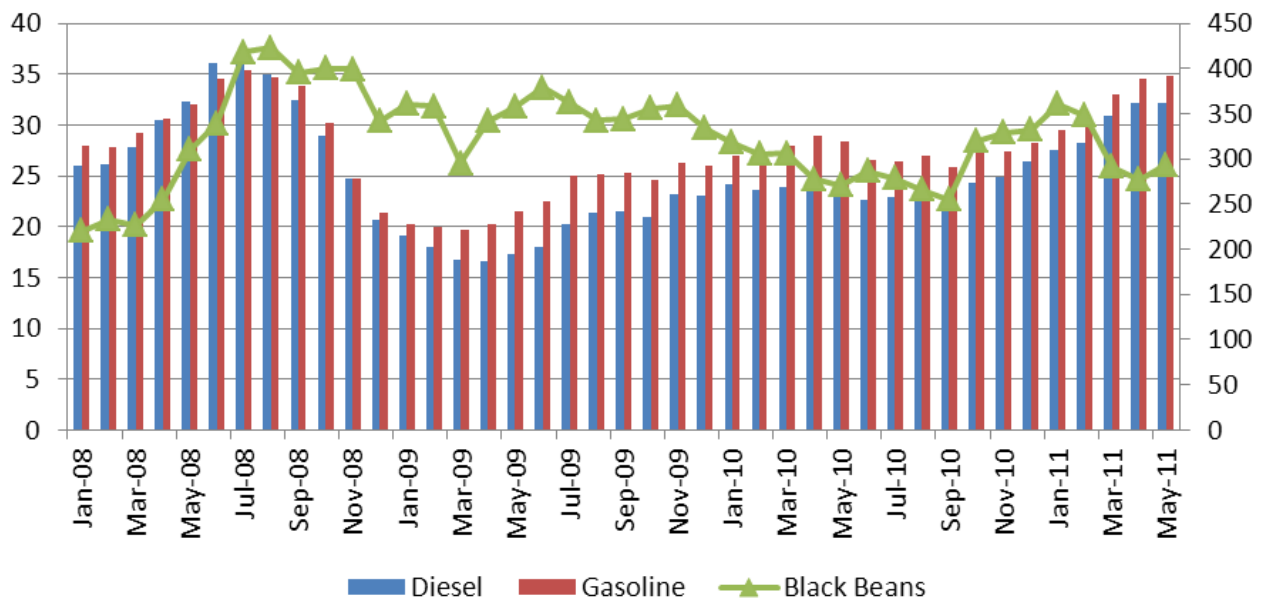
Figure 16. Diesel and Gasoline Prices (GTQ/Gallon) compared to Black Bean Retail and Production Zone Price Difference (GTQ/lb)- La Terminal Market



Source: BEST calculation based on MAGA prices

On the other hand, production zone prices before 2011 adjusted more quickly to changes in fuel prices. However, in 2011, data suggest that production zone prices are reacting slowly to fuel price variations, and this could negatively affect farm prices (Figure 17).

Figure 17. Diesel and Gasoline Prices (GTQ/Gallon) compared to Black Beans Production Zone Prices (GTQ/lb)



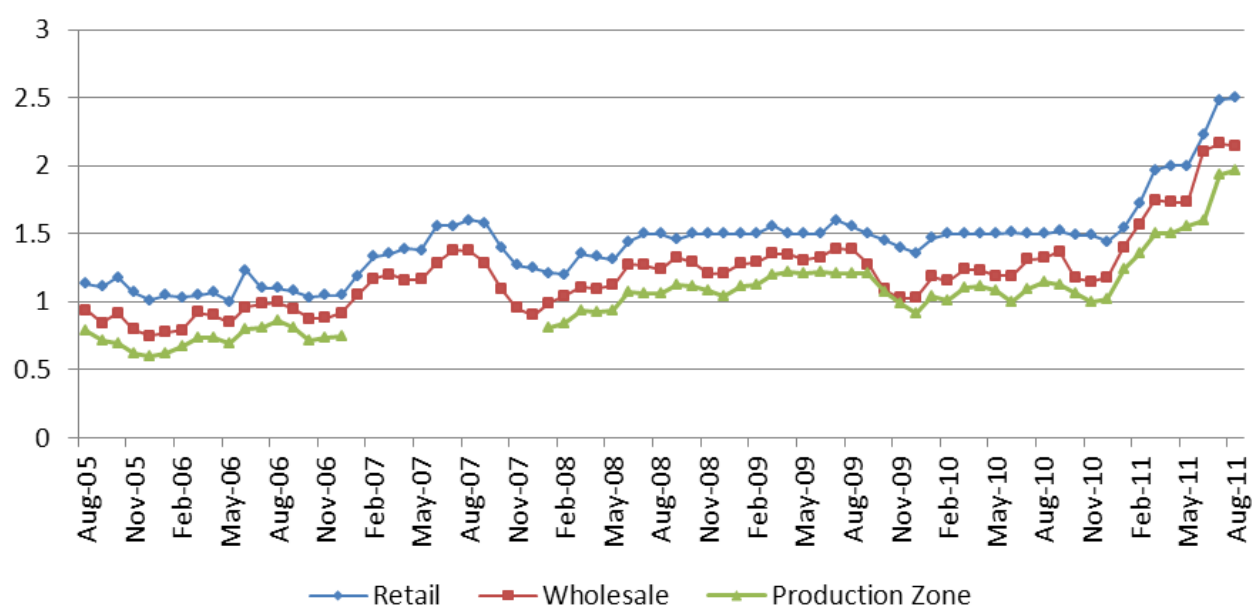
Source: BEST calculation based on MAGA prices

Figure 18 presents a comparison between fuel prices and production zone prices. In 2008, increasing fuel costs were accompanied by increasing production zone prices. By 2009, while

fuel costs went down, production prices were also down, but relatively higher compared to the previous year. In 2010, fuel prices increased again, while production prices continued its downward trend. After a jump in the last part of 2010 and beginning of 2011, producer prices decreased again, while fuel costs continued to increase.

In the case of white maize, production zone, wholesale and retail prices showed a similar trend from 2005 to 2011 at La Terminal market. All prices were relatively higher from November 2006 and by mid-2007 they started a downward trend.¹⁸ From 2008 to 2010, prices changed minimally. In 2011, all prices started to show rapid increases (Figure 18).

Figure 18. 2005 - 2011 White Maize Producer Zone, Wholesale and Retail Prices – La Terminal Market Guatemala City (GTQ/lb)

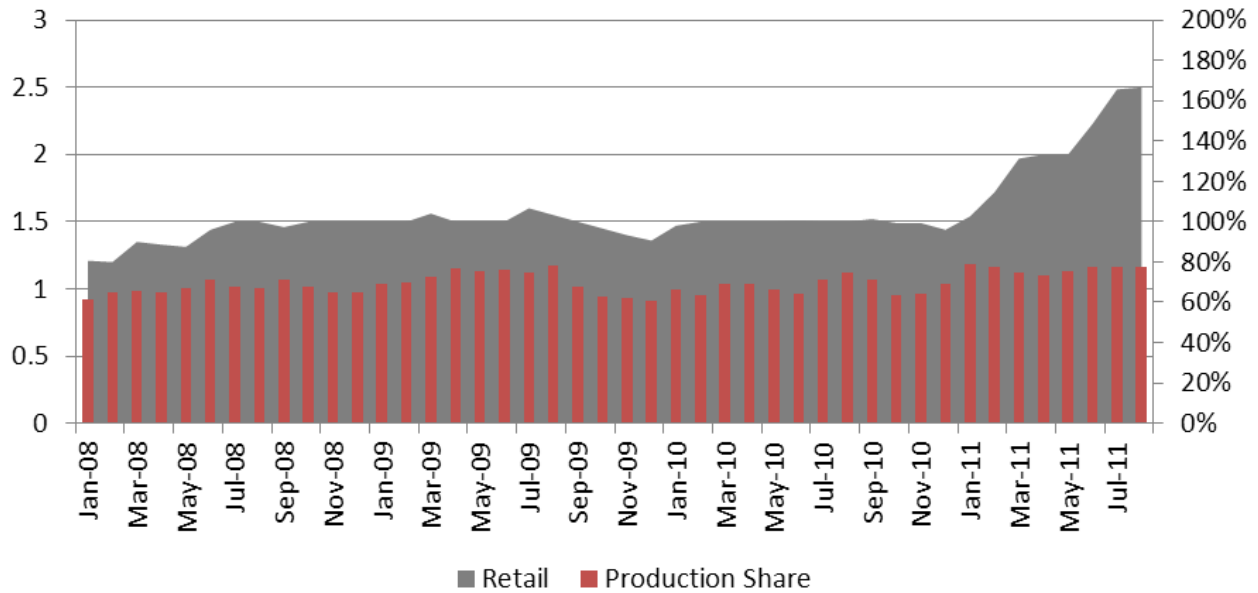


Source: BEST calculation based on MAGA prices

In general, white maize production zone prices as a percentage share of retail prices have maintained a relatively constant trend over the years. In 2011, while retail prices continued to increase, shares of production zone prices remained constant at 80% of retail prices. This situation implies that variations in retail prices are quickly passed on to production zones contributing to maintaining a relatively constant marketing spread (Figure 19).

¹⁸ MAGA does not report production zone prices for 2007.

Figure 19. White Maize Retail Prices and Share of Production Area Prices – La Terminal Market Guatemala City (GTQ/lb)

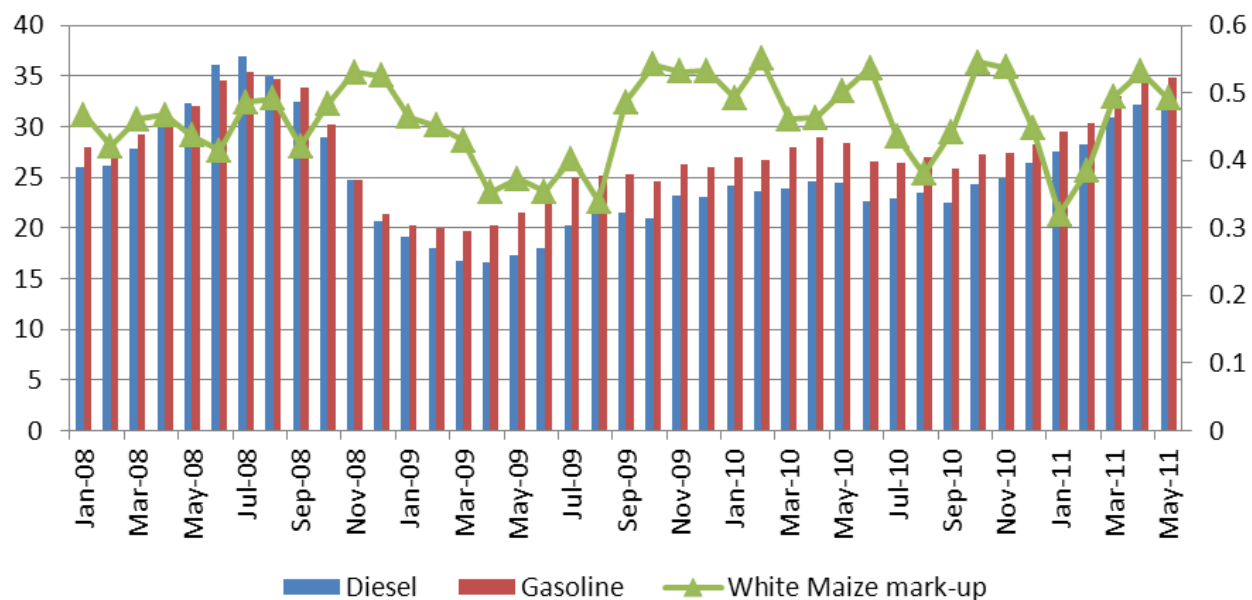


Source: BEST calculation based on MAGA prices

From 2008 to 2011, retail and production zone price differences¹⁹ showed a variable trend, but overall changing with the changing cost of fuel. This situation suggests that retail prices generally adjusted to changes in fuel prices (Figure 19).

¹⁹ The difference between retail price and production zone prices is considered the marketing margin. Marketing margins usually contain transportation costs. In this case, it is assumed that fuel costs represent the bulk of transportation costs. Thus, any change in fuel cost is expected to affect prices.

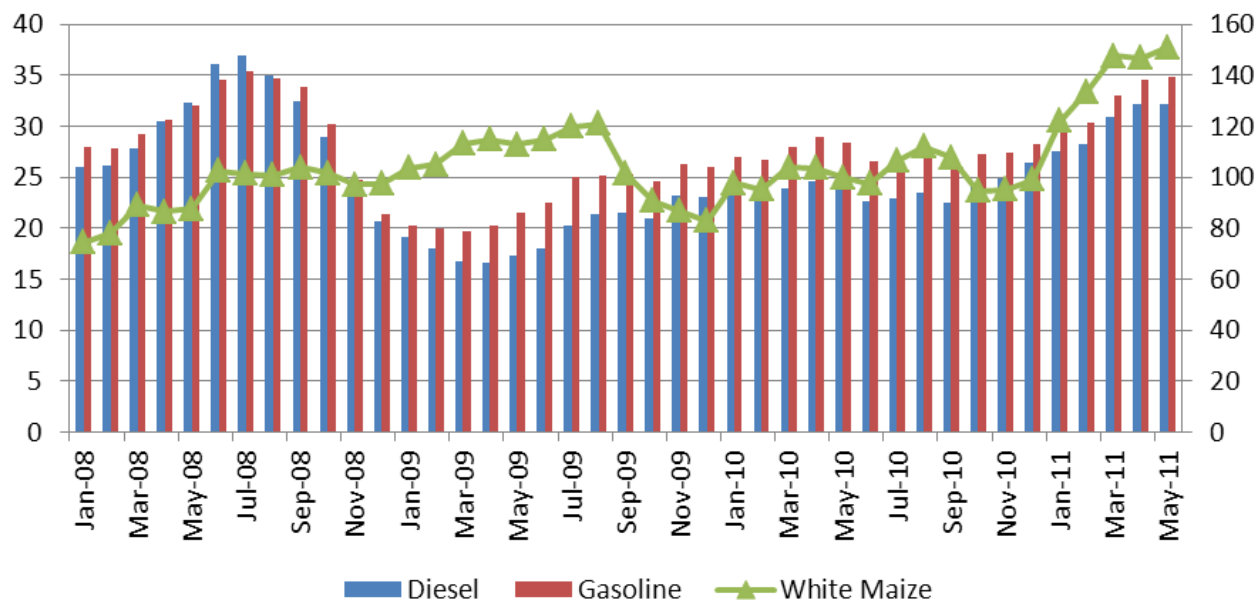
Figure 20. Diesel and Gasoline Prices (GTQ/Gallon) and White Maize Retail and Production Zone Price Difference (GTQ/lb) - La Terminal Market



Source: BEST calculation based on MAGA prices

Comparing production zone prices and fuel costs, it is possible to suggest that production zone prices and fuel costs have had similar price variation trends, suggesting that production price also adjust relatively fast to fuel cost changes (Figure 21). In 2008, increasing fuel costs were accompanied by increasing production zone prices. By 2009, while fuel costs went down, production zone prices remained relatively unchanged, but higher than the previous year. In 2010 and 2011, both fuel and production zone prices increased again (Figure 21).

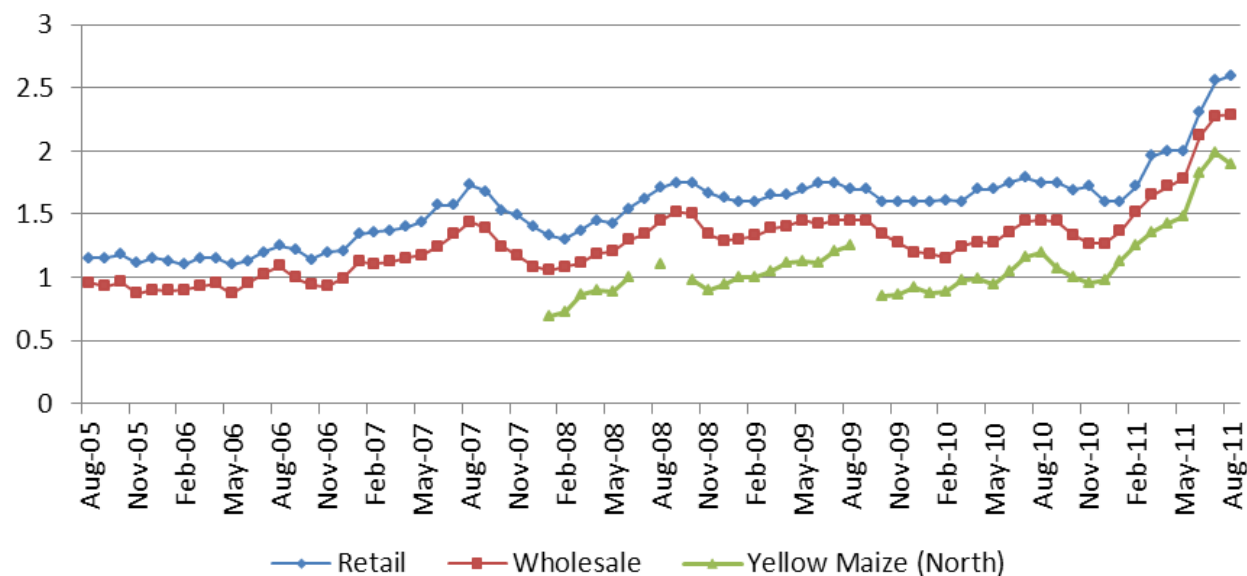
Figure 21. Diesel and Gasoline Prices (GTQ/Gallon) compared to White Maize Production Zone Prices (GTQ/lb)



Source: BEST calculation based on MAGA prices

Yellow maize production zone, wholesale and retail prices presented similar trends from 2008 to 2011.²⁰ Prices were relatively stable until the end of 2010. However, by 2011, all prices started to show rapid increases (Figure 22).

Figure 22. 2005 - 2011 Yellow Maize Producer Zone, Wholesale and Retail Prices – La Terminal Market Guatemala City (GTQ/lb)

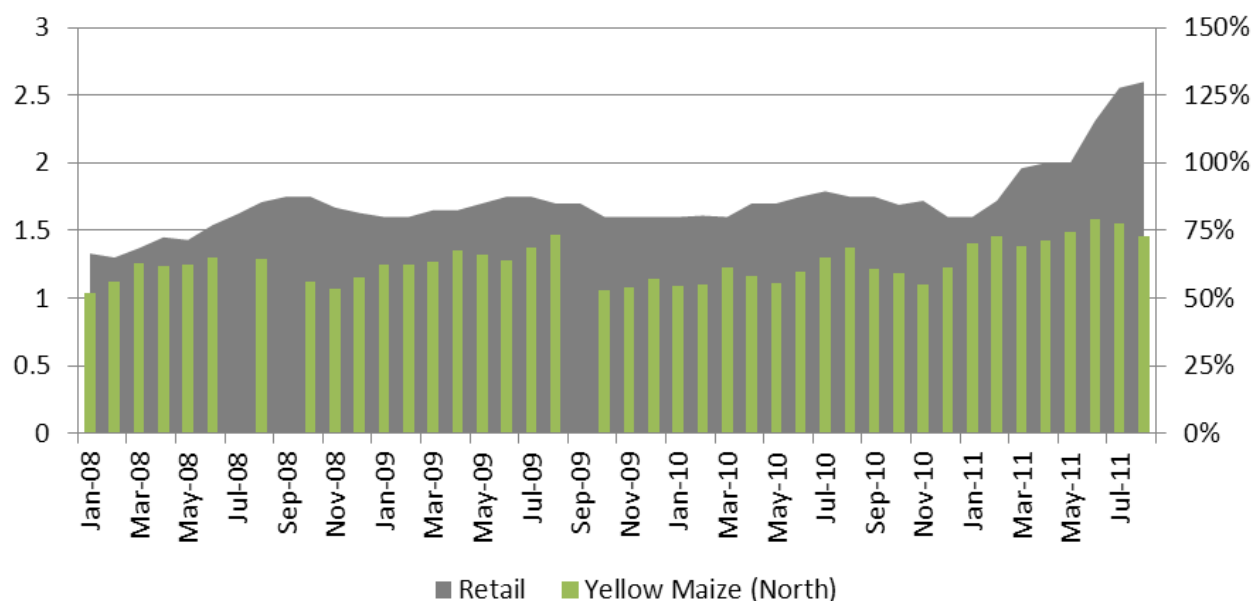


Source: BEST calculation based on MAGA prices

²⁰ MAGA reports production zone prices from 2008

In general, yellow maize production zone prices' share of retail prices have maintained a relatively constant trend over the years. In 2011, while retail prices continue its upward trend, the share of production zone price has remained constant at around 75 percent. This situation implies that price variation from retail to production zone prices is transmitted relatively fast which contributes to maintaining a relatively constant marketing spread (Figure 23).

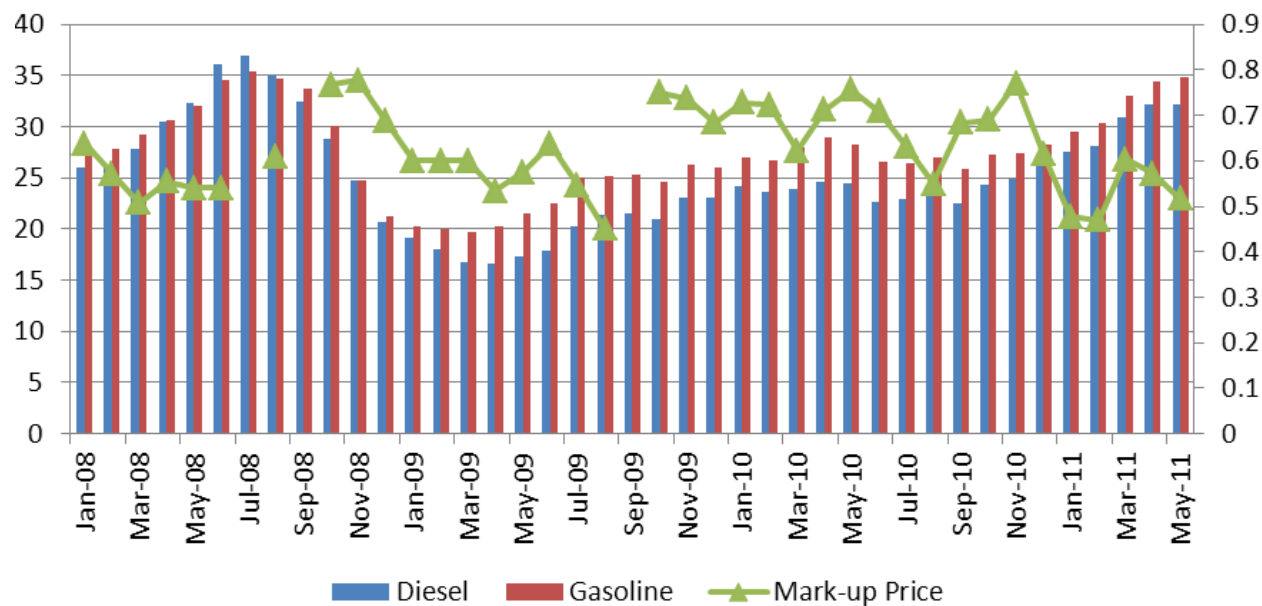
Figure 23. Yellow Maize Retail Prices and Share of Production Area Prices – La Terminal Market Guatemala City (GTQ/lb)



Source: BEST calculation based on MAGA prices

From 2008 to 2011, retail and production zone price difference showed overall variable trends. However, price differences tended to follow variations in fuel costs. This situation suggests that yellow maize retail prices generally adjusted rapidly to changes in fuel prices.

Figure 24. Diesel and Gasoline Prices (GTQ/Gallon) and Yellow Maize Retail and Production Zone Price Difference (GTQ/lb) - La Terminal Market

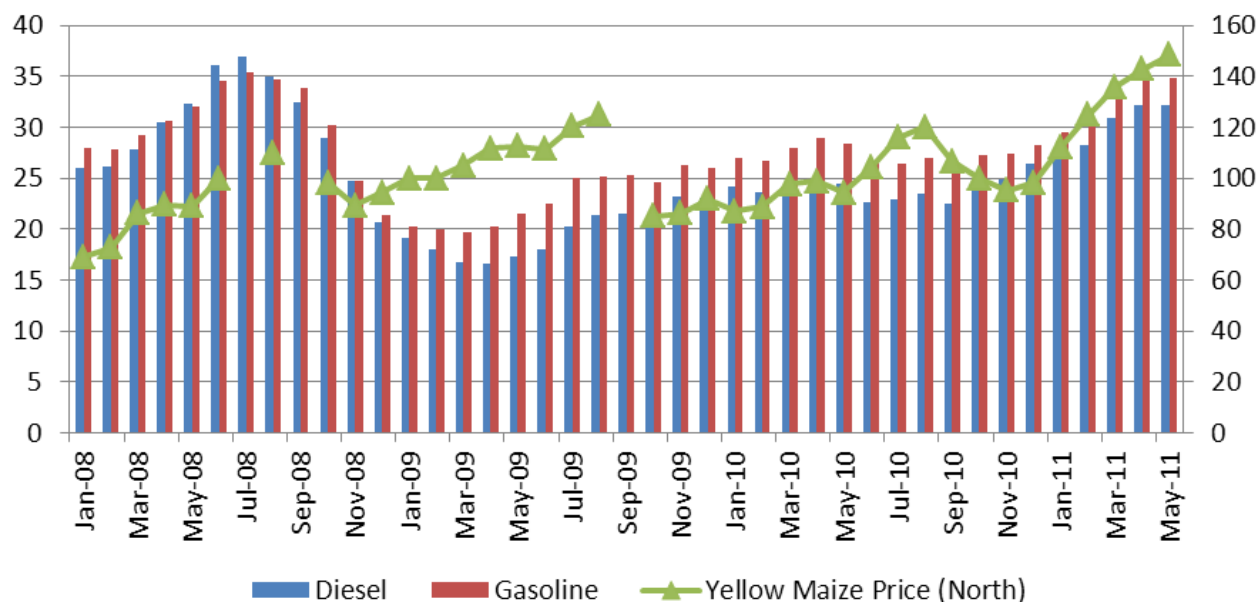


Source: BEST calculation based on MAGA prices

When comparing production zone prices and fuel costs, it is possible to suggest that prices have a similar variable trend which could also suggest that production price adjust relatively quickly to fuel cost changes (Figure 24).

Figure 24 presents a comparison of fuel prices with production zone prices. In 2008, increasing fuel costs were accompanied by increasing production zone price. By 2009, while fuel costs went down, production zone prices continued a trend upwards. In 2010 and 2011, both fuel and production zone prices increased rapidly.

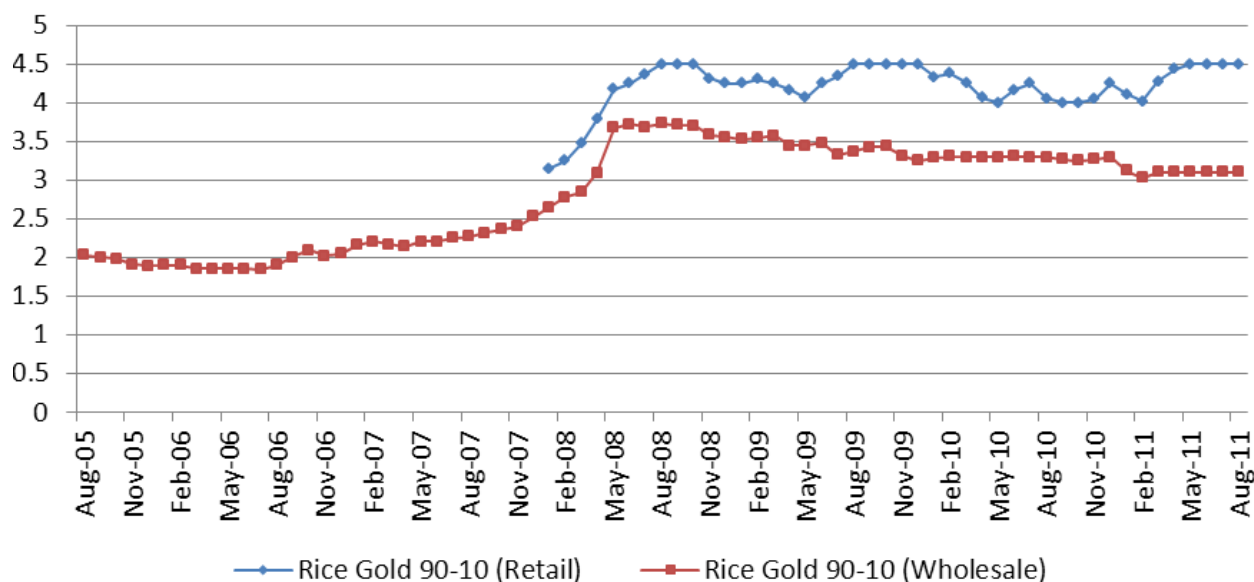
Figure 25. Diesel and Gasoline Prices (GTQ/Gallon) compared to Yellow Maize Production Zone Prices from the North (GTQ/lb)



Source: BEST calculation based on MAGA prices

Available data for rice at wholesale show that prices remained relatively stable from 2005 until approximately August 2007 in La Terminal market. After 2007, prices started to steadily increase up until May 2008 and remained relatively unchanged until August 2011. On the other hand, retail prices²¹ showed more variation from November 2007 until 2011 (Figure 26).

Figure 26. 2005 – 2011 Rice Retail and Wholesale Prices – La Terminal market (GTQ/lb)

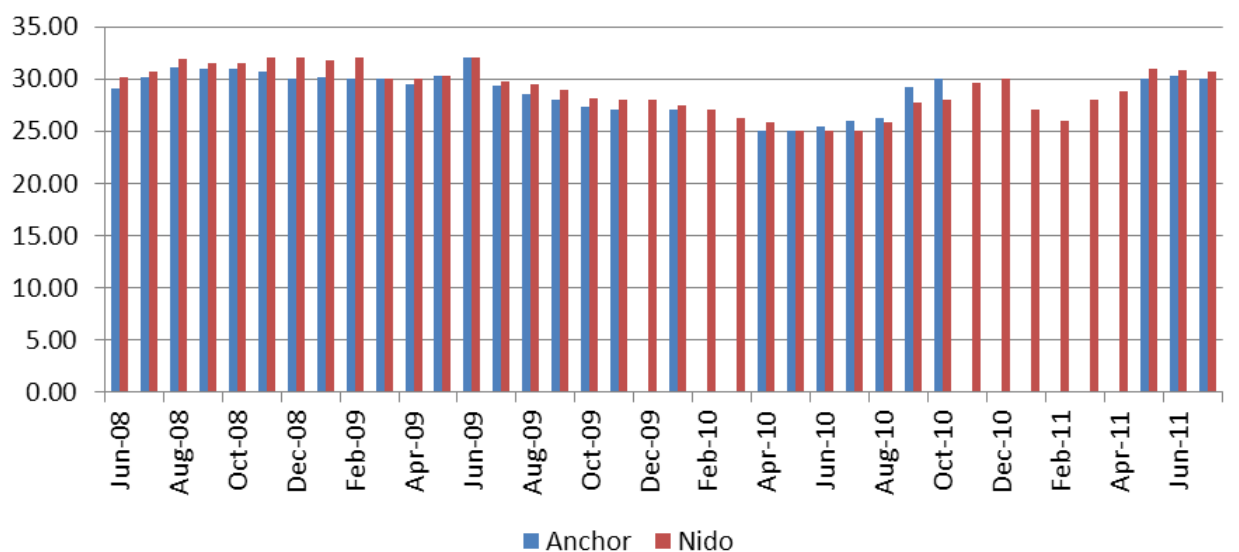


Source: BEST calculation based on MAGA prices

²¹ MAGA reports retail prices from November 2007

MAGA reports prices for two main brands of dry milk at La Terminal market: Anchor and Nido. In general, dry milk –Anchor” 360-gram pack prices are lower than the brand –Nido”. However, over the years retail prices for both brands have shown similar trends from 2008 to 2011. While prices remained relatively stable from June 2008 until 2009, prices started to steadily decrease in 2009. From 2010 until 2011, prices increasingly showed more variation (Figure 27)

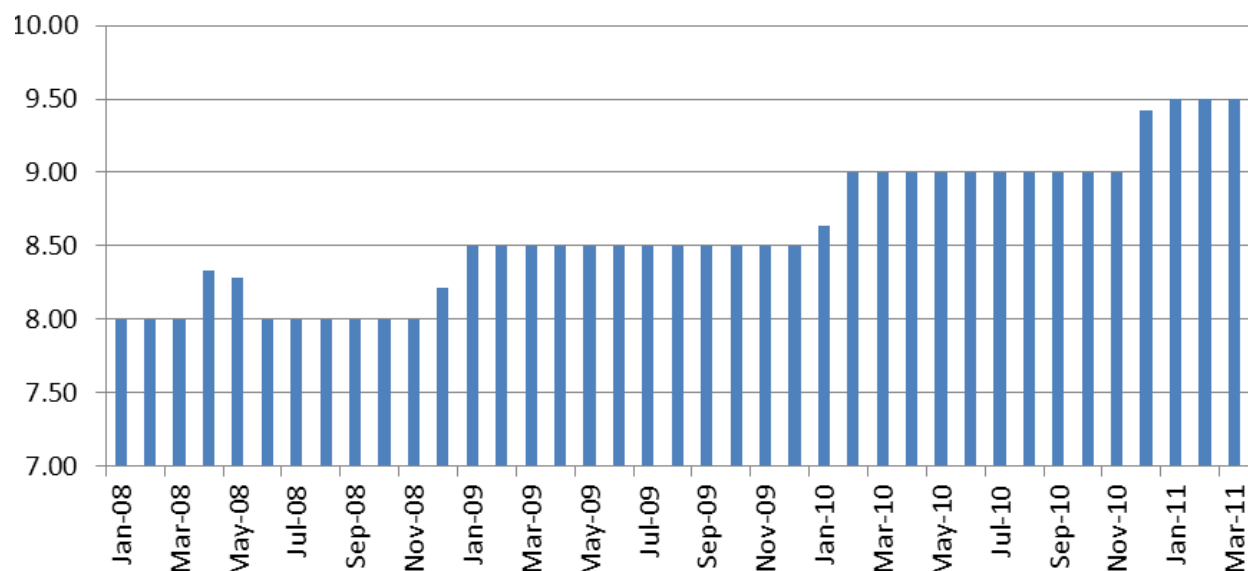
Figure 27. 2008-2011 Average Retail Price Dry Milk – La Terminal (GTQ/360g pack)



Source: BEST calculation based on MAGA prices

Pasteurized milk prices followed a more fixed trend over the years. In general, each year retail prices increased by around 4 to 6 percent (Figure 28)

Figure 28. 2008 – 2011 Pasteurized Milk Retail Prices – La Terminal (GTQ/liter)

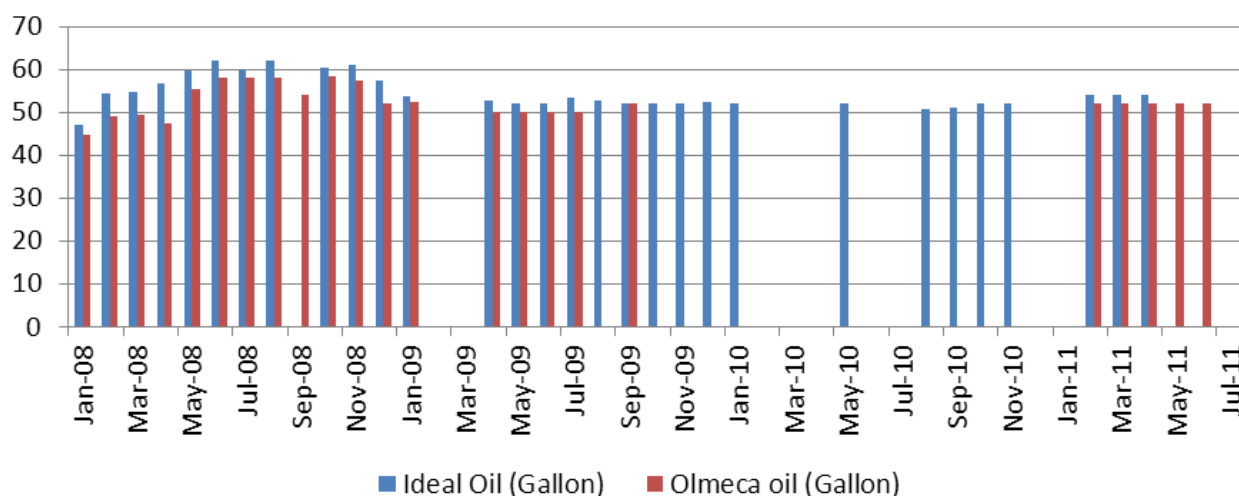


Source: BEST calculation based on MAGA prices

IdealSA and Olmeca are the two largest edible oil companies in Guatemala. Ideal sells a slightly higher-end blend of imported soy and sunflower oils, while Olmeca blends domestic palm and imported soy. Retail prices for Olmeca and Ideal oil at La Terminal market reflect this slight difference in each company's target markets.

From 2008 to 2011, MAGA irregularly reported retail prices for Ideal and Olmeca oil sold by the gallon. Based on these data, prices showed more variation (upward and downward trends) during 2008. Since May 2009 until June 2011 retail prices of both oil sold by the gallon remained relatively unchanged (Figure 29)

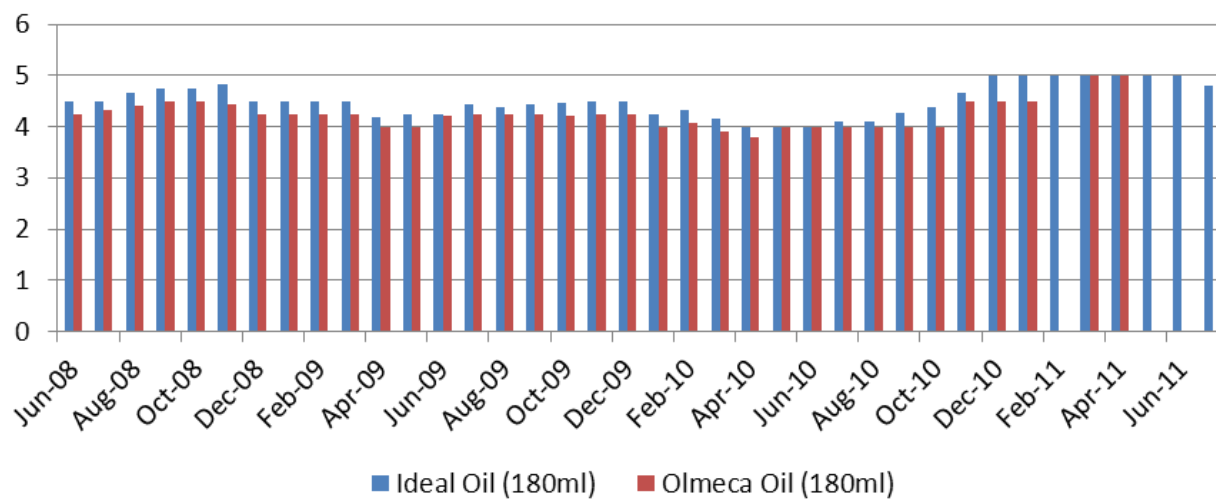
Figure 29. 2008 – 2011 Vegetable Oil Retail Price – La Terminal Market (GTQ/Gallon)



Source: BEST calculation based on MAGA prices

In the case of oil sold in 180 ml bottles, both IdealSA and Olmeca brands showed similar trends from June 2008 until 2011. While for the most part, prices were slightly above 4 GTQ per bottle from 2008 to 2009, prices remained relatively constant at around 4 GTQ per bottle during 2010. By the end of 2010 and in 2011, prices increased steadily to reach 5 GTQ (Figure 30).

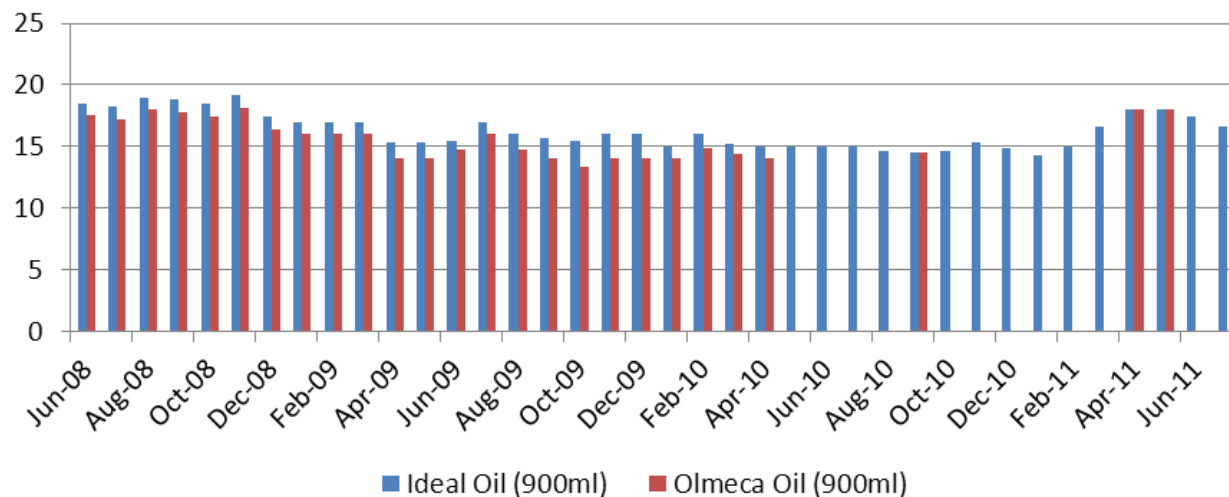
Figure 30. 2008 – 2011 Vegetable Oil Retail Price – La Terminal Market (GTQ/180ml bottle)



Source: BEST calculation based on MAGA prices

Oil sold in 900 ml bottles for both brands (IdealSA and Olmeca) showed very small price differences from 2008 to 2011. While prices in 2008 were relatively high (above 17 GTQ per bottle), in 2009 prices started a downward trend until February 2011 when it reached just below 15 GTQ per bottle. After February 2011, prices again increased to around 17 GTQ per bottle (Figure 31).

Figure 31. 2008 – 2011 Vegetable Oil Retail Price – La Terminal Market (GTQ/900ml bottle)



Source: BEST calculation based on MAGA prices

II.v. Malnutrition

Guatemala has the highest malnutrition rates in Latin America, and one of the highest in the world; the latest survey reveals that 43 percent of the population is chronically malnourished (WFP and FAO, 2010) (INE, 2009). The eastern and northeastern areas - especially the dry

corridor - have the highest prevalence of acute malnutrition; the west accounts for the highest prevalence of chronic malnutrition (WFP and FAO, 2010). From 2004 to 2008, Guatemala accounted for almost half of all underweight-related deaths of children under five in Costa Rica, El Salvador, Honduras, Nicaragua, Panama, and the DR (WFP, 2008).

The WFP/FAO CFSAM cites increased child malnutrition as one result of the 2009 tropical depression (DT 16) and the 2009 drought. The study gives no clear cause of Guatemala's high malnutrition rates, but points to lack of medical care, mothers' poor health statuses, households' inability to maintain a healthy diet, poor hygiene, and poverty as underlying factors.

II.vi. Water, Sanitation, and Hygiene

The WFP/FAO CFSAM found that most households had access to piped water sources, though some depended on natural sources, which may be contaminated. According to the 2002 census, water coverage is 75 percent, and sanitation access is 47 percent. About 45 percent of households have drainage (INE, 2006). In 2006, 62 percent of households had piped water sources inside their houses. Access to sanitation is much lower in rural areas (about 17 percent coverage) than in urban areas (about 77 percent coverage).

Annex III. Detailed CDSO IPP Calculations

Date Sales Price Determined	FOB Argentina	Freight	Estimated IPP (C&F)	IPP Moving Avg (MA)	IPP MA + 10%	IPP MA - 10%	Sales Price	Sales price as % of C&F
May-07	692	56.00	748.00	750.99	826.09	675.89	760.8	102%
Jun-07	748	59.00	807.00	795.44	874.98	715.90		
Jul-07	787	60.20	847.20	835.94	919.53	752.35		
Aug-07	809	63.50	872.50	876.58	964.24	788.92		
Sep-07	841	64.00	905.00	929.83	1022.81	836.85	876.4	97%
Oct-07	885	66.20	951.20	982.39	1080.63	884.15	875.5	92%
Nov-07	1,004.00	69.25	1,073.25	1055.53	1161.08	949.98		
Dec-07	1,030.00	80.00	1,110.00	1153.83	1269.21	1038.45		
Jan-08	1,162.00	76.20	1,238.20	1248.99	1373.89	1124.09		
Feb-08	1,326.00	70.50	1,396.50	1311.10	1442.21	1179.99	1,384.1	99%
Mar-08	1,358.00	69.00	1,427.00	1366.40	1503.04	1229.76		
Apr-08	1,315.00	68.80	1,383.80	1407.86	1548.65	1267.07		
May-08	1,310.00	76.50	1,386.50	1407.08	1547.79	1266.37		
Jun-08	1,369.00	76.50	1,445.50	1356.13	1491.74	1220.52	1,475.7	102%
Jul-08	1,320.00	72.60	1,392.60	1288.62	1417.48	1159.76		
Aug-08	1,100.00	72.25	1,172.25	1174.84	1292.32	1057.36		
Sep-08	981	65.25	1,046.25	1030.34	1133.37	927.31		
Oct-08	775	42.60	817.60	879.74	967.71	791.77		
Nov-08	695	28.00	723.00	786.19	864.81	707.57		
Dec-08	617	22.60	639.60	713.74	785.11	642.37		
Jan-09	682	22.50	704.50	686.47	755.12	617.82	777.8	110%
Feb-09	657	27.00	684.00	700.59	770.65	630.53		
Mar-09	649	32.25	681.25	746.97	821.67	672.27		
Apr-09	761	32.60	793.60	778.17	855.99	700.35	800.2	101%
May-09	837	34.50	871.50	798.73	878.60	718.86		
Jun-09	826	34.50	860.50	831.93	915.12	748.74		
Jul-09	751	35.80	786.80	833.54	916.90	750.19		
Aug-09	810	37.25	847.25	827.89	910.68	745.10		
Sep-09	767	34.67	801.67	833.69	917.06	750.32	770.5	96%
Oct-09	810	33.25	843.25	856.77	942.45	771.10		
Nov-09	856	33.50	889.50	864.02	950.43	777.62		
Dec-09	865	37.20	902.20	878.89	966.78	791.00		
Jan-10	844	39.50	883.50	883.68	972.048	795.312		
Feb-10	836	40.00	876.00	878.13	965.943	790.317		
Mar-10	824	43.20	867.20	866.64	953.304	779.976	888.5	102%
Apr-10	816	45.75	861.75	854.46	939.906	769.014	898.1	104%
May-10	796	48.75	844.75	852.06	937.266	766.854	841.3	100%
Jun-10	776	46.60	822.60	866.92	953.612	780.228		
Jul-10	825	39.00	864.00	891.53	980.683	802.377		
Aug-10	901	40.50	941.50	939.08	1032.988	845.172	921.7	98%
Sep-10	945	39.80	984.80	1008.76	1109.636	907.884		
Oct-10	1046	36.50	1,082.50	1087.41	1196.151	978.669	1,060.2	98%
Nov-10	1138	33.00	1,171.00	1161.96	1278.156	1045.764		

Date Sales Price Determined	FOB Argentina	Freight	Estimated IPP (C&F)	IPP Moving Avg (MA)	IPP MA + 10%	IPP MA - 10%	Sales Price	Sales price as % of C&F
Dec-10	1224	33.25	1,257.25	1227.25	1349.975	1104.525		
Jan-11	1277	37.25	1,314.25	1262.35	1388.585	1136.115	1,246.1	95%
Feb-11	1275	36.25	1,311.25	1279.24	1407.159	1151.312	1,232.7	94%
Mar-11	1221	37.00	1,258.00	1277.44	1405.179	1149.692		
Apr-11	1216	39.43	1,255.43	1269.83	1396.808	1142.843		
May-11	1209	39.25	1,248.25	1265.18	1391.693	1138.658		
Jun-11	1238	38.20	1,276.20	1269.28	1396.203	1142.348		
Jul-11	1250	38.00	1,288.00	1272.74	1400.011	1145.464		
Aug-11	1240	38.50	1,278.50	1280.90	1408.99	1152.81	1223.17	96%

Notes:

[1] FOB Price: 15071000 Bulk Soybean Oil - Secretaría de Agricultura, Ganadería, Pesca y Alimentos

[2] Freight Rate: IGC Ocean Freight Rates for bulk dry grain rates, not bulk liquid rates as these were unavailable. Note that the freight rate used for this IPP calculation is the Argentina – Mexico route as published by IGC as proxy.

[3] Sales Prices: Title II Awardees (via CRS) and AMEX International

Annex IV. Methodology for Determining Impact of Monetized Food Aid²²

IV.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.

IV.ii. Analytical Process

IV.ii.i. Step 1: Initial Commodity Selection

A desk review will identify an initial set of commodities for study. This review will be based on the best available trade statistics and any previous Bellmon studies, and informed by country situational reports and policy reviews. Ideally, each commodity will be selected based on a complete set of objective criteria involving eligibility, freedom from trade and policy restrictions, and, most importantly, the market's ability to absorb a volume of monetized commodity without substantial disruption. In practice, this ideal is constrained by information gaps and varying standards of what may be considered "substantial" in different country and regional contexts. Official trade data is often incomplete, out-of-date, or contradictory.

²² This methodology was developed to provide guidance prior to the initiation of a new MYAP/SYAP cycle; however, in the case of monetization, the methodology for the market analysis is exactly the same whether the analysis is conducted mid-MYAP or prior to the beginning of a new MYAP/SYAP cycle.

The field visit will involve triangulating trade figures, filling in data gaps, and discussing with traders and potential buyers to assess 1) interest and ability to purchase commodities in various quantities; and 2) factors affecting demand and supply of commodities with which a monetized commodity would likely compete.

The following set of “tests” is used, in whole or in part, to make an initial assessment of the feasibility of monetization without introducing Bellmon concerns:

Test 1: Purchase and export restrictions. There are various layers of 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.²³

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 VI.III is a survey questionnaire tailored to potential buyers of Title II monetized commodities. This set of questions should form the basic foundation for meetings with millers, traders, and other potential buyers of monetized commodities.

Annex VI.IV is a survey questionnaire form tailored to current NGO Monetization Units, for those countries where these units are operational. This set of questions should form the basic foundation for meetings with Monetization Units to assess their experience monetizing commodities in-country.

In countries with substantial informal trade, the analyst will gather all available market intelligence on the volume and pattern of informal trade where available. This will involve reliance on FEWS NET cross-border trade estimates and discussions with key stakeholders (such as Ministries) in the field. Informal trade may be substantial, because informal trade is generally between two low-income food-deficit countries; disruption of such trade would be considered particularly undesirable. The volume of commodity recommended for monetization will exclude informal trade volumes and rely instead on commercial import and food aid import volumes as a basis for estimating unmet demand.

Test: Generally, the value of the commercial import market must be large enough so that monetization sales would generate at least US\$1 million. This amount is a guideline based on analysis of perceived Awardee funding need, but which is subject to review, especially as funds become available from other sources (e.g., 202(e) funding). Commodities that would generate less than US\$1 million in funds will be considered, particularly where there are only one or two commodities eligible/feasible for monetization and a diversified basket of commodities would be preferable. If sales are expected to displace normal commercial imports, the displaced volume should not exceed 10 percent of commercial import volumes (averaged over 5 years) per BEST's current guideline. If sales are expected to compete with domestic production, the

²³ Where supply in the previous years is especially stable, a single-year projected increase in supply is possible using annual population growth figures. In the most recent round of BEST studies, many Title II countries had experienced substantial inter-annual fluctuations in supply during the five-year period under review (on the order of 100 percent change year-on-year), partially due to the food price crisis of 2007. This made projections much more difficult and unreliable. However, as prices and therefore supply stabilize, such projections would be a reasonable basis on which to estimate a recommended volume for monetization.

displaced volume should not exceed 5 percent of domestic production (averaged over 5 years) per BEST's current guideline.

IV.ii.ii. Step 2: Market Analysis

Additional market research and analysis are conducted to assess the likelihood of achieving a fair and competitive market price. The analyst will review all available evidence of market structure, level of competition, and available sales platforms, including findings from interviews with traders, producers, potential buyers, and any current monetizing agents. To support a recommendation of commodity monetization, the analyst must conclude that there is a high likelihood of achieving a fair market price in the near-term. Achievement of a fair market price may be expected in the near-term based on the following criteria.

Criterion 1: Structure and composition of the buyer market supports competition. There must be enough potential buyers with sufficient purchasing power and market positioning to absorb the likely volumes of monetized commodities without exerting a negative influence on fair and efficient market function. In some cases, monetizing agents may have long-term relationships with a single buyer. This may or may not indicate a problem. As discussed in the following section, whether Awardees are able to monetize commodities at or near IPP provides strong suggestive evidence of the level of competition.

Test: If there is a single buyer, evidence of a collusive group of buyers, or other indications of a buyer's market that regularly restricts free trade and competition, dominates the market, or exercises anti-competitive practices while purchasing monetized and/or commercial food commodity imports, then it may be expected that a fair market price may not be achieved and monetization may be supporting an uncompetitive industry. If there are many buyers, or there is no substantial evidence to indicate that a single or few buyers are exhibiting this negative behavior, a fair market price may be achieved.

Criterion 2: Likelihood of achieving a fair market price is high. An IPP is the best estimate of a fair market price for commercially imported commodities. An estimated IPP is based on the sum of a simulated commercial entity's cost to import and sell the same (or very similar) food commodity. If import parity price has been consistently achieved in the past, and can be expected to be achieved in the near future given current market conditions, a commodity may be recommended for monetization.

The estimated import parity price is calculated by adding the following costs:

- Freight On Board (FOB) from exporting location/market (for the same or similar commodity)
- Insurance
- Ocean freight to point of import²⁴

²⁴ BEST will use CIF at port prices whenever they are available.

- 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 of +/- 10 percent. Monetized sales transacted at prices above or below the margin of error can be reasonably attributed to profit or loss, respectively.

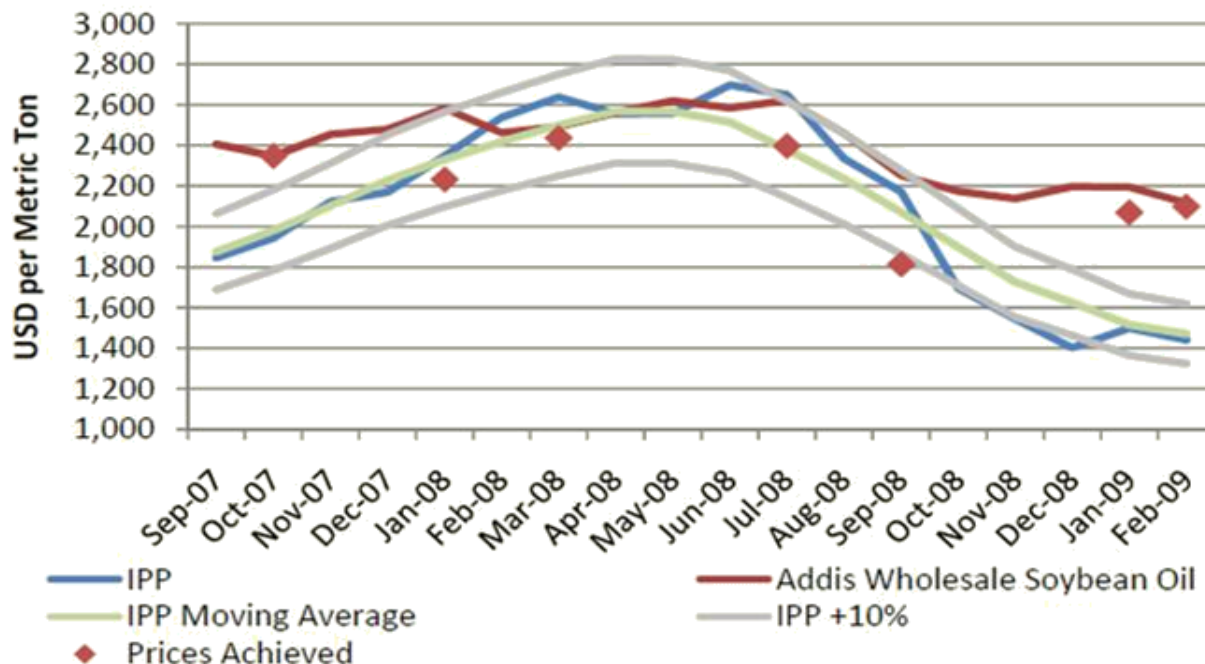
Test: If IPP analysis reveals a consistent pattern of pricing below IPP, and there are no substantial prospects for improvements in the negotiating capacity of the Awardee(s) (e.g., no significant increase in the number of potential buyers), future monetizations of that commodity would not be recommended 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 6. 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 32. 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.²⁵

²⁵ 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.

IV.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.²⁶ Anticipated proceeds from such a sale are presented.

²⁶ 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 33. Decision Tree

5 initial commodities considered for Monetization in Country X:

- CDSO
- HRWW
- NFDM
- Rice
- Pinto Beans

No policy restrictions prevent the importation of HRWW, NFDM, Rice, or Pinto Beans, but there are restrictions for CDSO.

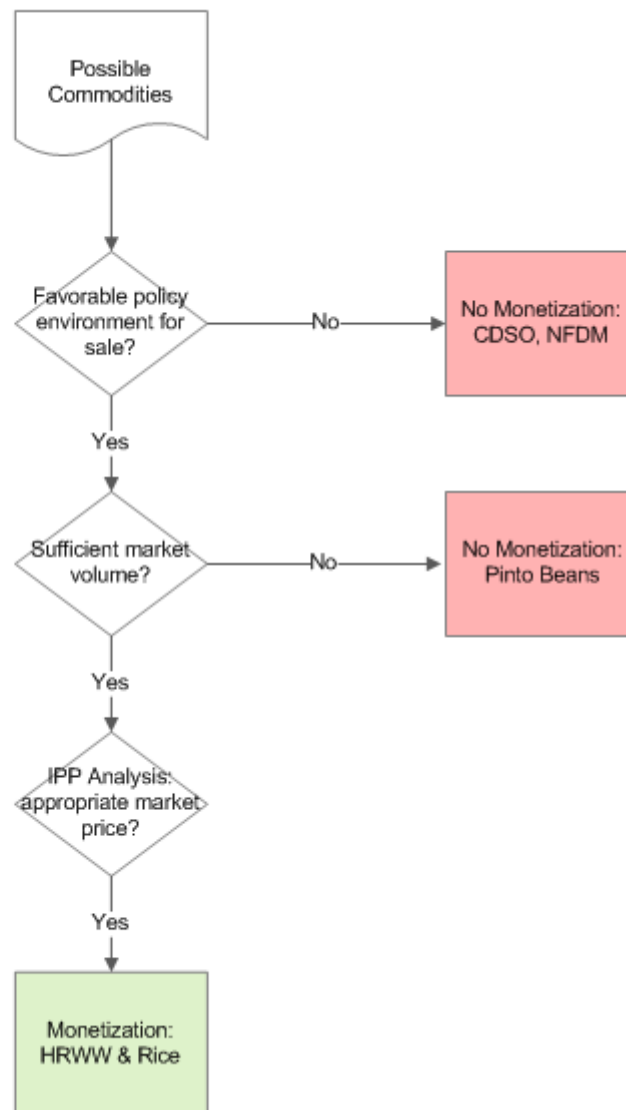
BEST research also indicates that the buyer for NFDM would probably use it to manufacture breast milk substitute, which preclude its monetization.

Based on trade data, HRWW, Rice and NFDM have an import market value of approximately \$60 million each.

The market for Pinto Beans is estimated to be only \$2 million however – this market is thus too small to be cost effective to generate monetization proceeds.

Import Parity Price calculations estimate that HRWW and Rice would be sold at appropriate local market prices.

Based upon market volume trade data, BEST analysis would recommend selling HRWW and Rice at 10% of their respective market volumes in Country X. This would generate an expected \$6 million in proceeds for each commodity.



Annex IV.I FFP FY12 Commodity 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

**Value-added food aid commodities processed, fortified, or bagged in the United States*

Annex IV.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 IV.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 IV.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 V. Methodology for Determining Impact of Distributed Food Aid²⁷

V.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 distributed²⁸ 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).²⁹ 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;

²⁷ 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.

²⁸ 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.

²⁹ 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.³⁰ Effective application of criteria which accurately identifies those households in need of food assistance is the first, and arguably the most important, condition to ensure Title II resources are used effectively and efficiently and yield the maximum food security impact. Once households are well-identified, maximum food security impact and minimum leakages are ensured when the size, frequency, and commodity composition of rations correspond most closely to household food needs. Similarly, distribution modalities and any associated conditionality of participation (such as Food for Education, Food for Work/Assets, or Maternal Child Health activities), play an important role in maximizing food security impact through effective targeting.

Two concepts are fundamental to targeting. Exclusion errors occur when food aid fails to reach the needy. Errors of exclusion are a humanitarian concern. Inclusion errors occur when food aid is provided to the non-needy. Errors of inclusion (“leakage”) are a Bellmon concern. Errors of inclusion are also a humanitarian concern because, by definition, leakage involves the inefficient use of scarce resources. Improvements in targeting (reductions in inclusion errors) achieves three simultaneous objectives: 1) increases efficiency of food of food aid in accomplishing

³⁰ For a review of the economic rationale, see Christopher Barrett, 2002, “Food Aid Effectiveness: It’s the Targeting, Stupid!”

humanitarian and development goals; 2) maximizes efficiency of Title II resources; 3) ensures compliance with the Bellmon Amendment.

While the BEST approach to assessing the potential impact of food aid starts with this assumption, it also recognizes that effective targeting is both expensive in terms of human and financial capital and extremely difficult to implement and sustain. Even the most effectively targeted programs can never prevent all leakage.³¹ 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.³² 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.³³ 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

³¹ For more background on targeting, see Hoddinott (1999), Barrett (2002), and EU/FAO (2008).

³² Importantly, whether the effect is substantial is quite subjective and will likely vary quite widely across contexts. While the BEST study will strive to provide adequate information about the type and proportion of market players that may be affected by distributed food aid, ultimately the determination of whether the impact might be "substantial" will rest with the informed judgment of the relevant USG decision-maker (typically the USAID Mission Director).

³³ 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.

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 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.

V.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.³⁴ The main staples consumed by poorest households in each potential target area will be outlined, with any seasonal differences noted.

Where current Awardee Mid-term or Final Evaluations are available, BEST will review evaluations to summarize any “lessons learned” for each modality.

Step 4: Review All Food Security Assessments to Identify an Appropriate Proxy Indicator of Additionality

USAID/Food for Peace development programs focus on chronically food insecure regions within Title II recipient countries. By definition (or default), program activities will be geographically targeted within a subset of sub-national units (e.g., districts/countries/provinces). Because of the localized nature of the impact of distributed food aid, the vulnerability of small markets to disruptions, and the sensitivity of small farmers to production disincentives, quantities 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

³⁴ 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.

level of distributed commodities, the BEST analysis explicitly recognizes that distributed food aid will be concentrated in only select areas within a country, and therefore must assess the volume of commodities suitable for distribution at a more localized level in order to provide Bellmon guidance.

Through review and application of appropriate indicators of additionality, an assessment of the relatively absorptive capacity of sub-national administrative units (typically at the first administrative unit such as province or district), based on proxy indicators of additionality, can further refine geographic targeting guidance and provide estimates of the populations that may be targeted for future food aid programs. While geographic targeting may not always be the most preferred or appropriate targeting criteria, in most cases it will be the easiest and least costly to administer and, of course, can be followed by application of other administrative or self-targeting criteria.³⁵

In the case of a distribution modality such as PM2A, which targets households with pregnant and lactating women and children under two years old for preventive nutritional supplementation, regardless of household wealth or food deficit, initial geographic targeting is critical as it represents the key program parameter to avoid potential Bellmon concerns. Effective targeting of a PM2A program, from a Bellmon perspective, therefore involves further refinement of initial geographic targeting based on estimated household food deficits on a relative basis, followed by targeting households based on PM2A program eligibility (i.e. all children 6-23 months and all pregnant/lactating women).

See Annex VII.II for a description of possible proxy indicators of additionality.

Step 5: If Possible, Assess Potential Beneficiary Coverage Using Country Budgetary Guidance

If applicable, when likely program dimensions are available (such as program budget and proposed ration), the analysis will assess the absorptive capacity of potential target districts. This assessment will be based on comparing the number of potentially eligible food insecure households with the estimated number of rations available for distribution under the given program.

For modalities with fairly standard rations in terms of both size and composition (e.g., Food for Work/Assets or Food for Education), BEST will provide basic cost comparisons of ration by modality, which will provide some guidance as to total beneficiary coverage possible, and therefore total volume of distributed commodities possible given budget constraints.

For modalities with (at present) less-standard rations in terms of both size and composition (e.g., PM2A), BEST will base ration scenarios on guidance from FFP/FANTA and review of current Awardee MCHN experience, if applicable. Likely parameters of a PM2A program

³⁵ 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>.

(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 indicator(s) of additionality), to estimate the number of households that could be targeted for year-round individual and household rations within each district without introducing Bellmon concerns.

BEST will then rank sub-national administrative units according to those in which PM2A rations would:

1. Most likely represent additional consumption, and therefore be unlikely to pose any negative Bellmon impact;
2. Address the highest rates of malnutrition at the district level; and
3. Target the largest total number of PM2A-eligible households, an important efficiency consideration when implementing an integrated development program.

Step 6: Review Food Security Assessments and Livelihoods Reports to Inform Sub-National Analysis

Descriptive analyses of the ways in which households secure their livelihoods, and their varying degrees of vulnerability to external shocks, provide critical context to a discussion of potential household responses to the receipt of food aid.

Assessed food insecurity. Whenever possible, BEST will list the relative ranking of administrative units' levels of food insecurity (e.g., high, medium, low) for each target area. The ranking may be based on measures of poverty (for example, from available Demographic Health Survey (DHS), poverty mapping, and/or census data) and the prevalence of stunting in children under five. Such a ranking would provide a measure of both food access and utilization. This assessment will be derived from the Food Security Country Framework whenever available.

The data available to assess food insecurity levels will vary from country to country, depending on the types of surveys and assessments conducted within a relevant time period. The BEST team, including all consultants, will undertake careful review of all alternative sources of food security assessments to determine the best available data for the distribution analysis.

Livelihoods. Based on a review of all available livelihood assessments and consultation with relevant experts in the field, BEST will provide an overview of livelihoods including key characteristics of food insecure households within each target area such as sources of food, sources of income, and possible impediments to utilization (for example, a high prevalence of diarrheal disease within the district which prevents proper absorption of nutrients).

Key vulnerable populations. Whenever possible, key vulnerable populations will be identified and latest available population figures will be provided.

Step 7: Report On-Going Food Aid and Cash Transfer Programs

To properly assess the expected level of “additionality” with the introduction of a new food aid program, BEST must first account for all pre-existing programs 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 “food gap” a proposed food aid distribution program should fill. This overview will allow both a spatial and temporal assessment of a potential food aid disincentive effect.

Step 8: Review All Available Baseline Market Analyses

Whether a donor provides food aid rations to food insecure households across the breadth of a country or only in a localized area, the donor must have an understanding of the current functioning of agricultural markets critical for food security, as those are the markets most likely to be impacted by the introduction of food aid.

When attempting to assess the potential impact of food aid in a localized area (whether distributed in kind, in cash, or through subsidized food sales), it is especially important to understand 1) the functioning of local markets and 2) how well-integrated local markets are with markets outside of the food aid intervention area, and therefore how any changes in food prices might be transmitted to other markets.

A unique challenge in attempting to assess the impact of food aid on markets and incentives in many LIFDC countries arises due to the lack of available high-quality and disaggregated baseline market information. Markets and market players have often been impacted by a series of complex changes; these changes reduce the utility of any but the most recent thorough

market assessments. Production and market data is often scarce and of very poor quality, and/or is tainted by concerns about politicization of the data. That said, while market analysis is often thought of as a highly quantitative exercise, much can be gained from a descriptive analysis of the structure, conduct, and performance of markets. Analysis using a SCP framework can be well-suited to low-cost rapid appraisal techniques, such as those used in BEST market analyses.

Step 9: Determine Key Commodities Markets and Set of Physical Markets for Field Visit

Without an understanding of how markets are currently functioning, it is not possible to provide guidance on the type, form, timing, or geographic targeting of food aid that is not likely to negatively impact markets or producer incentives. To address this initial gap in knowledge, the study team may be required to undertake a baseline Market Analysis, using a Rapid Assessment Tool (see Annex VII.I), to assess the current state of agricultural markets as of the study date. The baseline will be accomplished through a combination of desk study, key informant interviews, and intensive field work.

The choice of commodity markets for assessment will be determined by the food aid commodities typically distributed in-country, commodity markets likely impacted by such distribution, and any commodities critical for food security whose prices may be impacted by a sudden increase in the supply of food in food insecure areas. These commodity markets will generally involve the major cereal markets (e.g., wheat, maize, small grains), major pulses, edible oils, and livestock markets.

The choice of physical markets to include in the field visit will likely include those major markets currently monitored by, for example, FEWS NET, WFP, and/or recipient country Ministries or Central Statistics Office, along with a host of other markets throughout the country 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 Theory³⁶ to the realities of markets in developing countries.³⁷

³⁶ See Bain (1959).

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.**

Basic conditions broadly describe basic traits of the country and economy, including seasons and seasonality, infrastructure, consumption characteristics such as elasticities³⁸ 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

³⁷ 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).

³⁸ 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).

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 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 traders³⁹ will provide an understanding of the factors affecting demand and supply of commodities with which a distributed commodity would likely compete. The overarching goal of such meetings in regards to the BEST analysis is to gain an understanding of the price responsiveness of supply and demand of select commodities, constraints to expansion, and inter-temporal arbitrage practices of traders that may be impacted by a supply increase via distributed food aid.

Travel to current and/or potential sites for Title II program implementation is an integral part of assessing potential impact of distributed food aid. Assessing conditions “on the ground” allows a detailed contextual knowledge of demand and supply dynamics affecting local markets. It is generally not possible to gain such knowledge through desk review and, therefore, travel to the specific sites in the study country will be an essential component of every BEST study. In addition to meeting with current and potential Title II Awardees, informal discussions with current or potential beneficiaries can offer insights into the appropriateness of specific Title II commodities for distribution, including palatability, ease of preparation, and price and quality factors relevant to demand responsiveness.

The BEST study is not intended to evaluate current food aid programming, but may nonetheless make observations during field visits which can be instructive for future food aid programming.

³⁹When 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.

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.

Annex V.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.⁴⁰

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?

⁴⁰ The lot number will tell you (1) something about market integration because you can trace back to origin and; (2) something about modality (if came from a MCJH, VGF, FFW etc) beneficiary, which can signal that you should investigate possible causes of inclusion errors associated with that specific intervention to see if it sheds light on necessary adjustments in targeting.

Do you have any “lessons learned” from your own past programs or other NGOs’ programs?

What are the greatest constraints to improving targeting?

If there is one thing you could change about the targeting process, what would it be?

How appropriate is the food aid program in terms of commodity type, ration size, delivery schedule, and venue?

Is the distributed food likely to be an “inferior good,” one consumed in disproportionately greater quantities by the poor?

Annex V.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 Score⁴¹ (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

⁴¹ For details on the calculation, use and validity of food consumption scores and other measures of dietary diversity in food security analysis, please see (1) WFP’s “Technical Guidance Sheet - Food Consumption Analysis: Calculation and Use of the Food

frequency of consumption of food items. Depending on whether the survey is implemented during a typical harvest or typical lean season will affect the validity of the FCS as a measure of average household food consumption. If, for example, the survey 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.⁴²

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.⁴³

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.⁴⁴ 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.

Consumption Score in Food Security Analysis”, accessible via http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197216.pdf; (2) Wiesmann, Doris (June 2009), *Validation of the World Food Programme’s Food Consumption Score and Alternative Indicators of Household Food Security*, IFPRI Discussion Paper 870, Washington DC; and (3) Hoddinott, John and Yisehac Yohannes (2002), *Dietary Diversity as a Food Security Indicator*, IFPRI Discussion Paper 136, Washington DC: IFPRI.

⁴² 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.

⁴³ 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.

⁴⁴ 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.

Prevalence of malnutrition in children

Chronic malnutrition (stunting, or low height-for-age) in children under five is an additional potential indicator of chronic food deficits. Malnutrition rates may reflect either inadequate intake, malabsorption due to infectious disease, or some combination of both. To the extent malnutrition rates reflect disease prevalence more than inadequate intake, any conclusions about food deficits drawn from malnutrition rates will be an inaccurate reflection of household food deficits. To the extent the prevalence of stunting reflects poor availability and/or poor access, such prevalence rates can appropriately inform geographic targeting from a Bellmon perspective.

Where a high percentage of households report both poor food consumption and poor food access, and surveys show high rates of chronic malnutrition in children under five, poor nutritional outcomes will likely be more responsive to food aid intended as supplemental nutrition. By geographically targeting areas where these indicators coincide, a PM2A program will help ensure that any given PM2A beneficiary household will more than likely increase overall household food consumption, and therefore represent additional consumption, relative to households in other geographic areas with lower rates of poverty and chronic malnutrition.

The most recent and reliable source of reliable district-level malnutrition rates is often available from Demographic and Health Surveys.

Recommended Reading

Barrett, Christopher (2002). *Food Aid Effectiveness: It's the Targeting, Stupid!* Cornell University Working Paper No. 2002-43.

FEWS NET (May 2008). *Structure-Conduct-Performance and Food Security*. FEWS NET Market Guidance No. 2.

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