

Commodity selection in the five pilot countries

Introduction

The Monitoring African Food and Agricultural Policies Project (MAFAP) intends to measure incentives and disincentives within the food and agricultural sector in Africa, through price gap indicators and starting with five pilot countries¹. The indicators will be estimated for commodities covering around 70% of total production value, which here we propose to identify according to their relevance for: (i) food security, (ii) food import bill (iii) export revenues, and (iv) production value. A tentative selection of commodities for each of the five pilot countries is also proposed.

Although more sophisticated methods may be adopted, we assume that a commodity is relevant for food security when it represents a large share of total food consumption and calorie intake (all in daily per capita values). Data on food consumption and calorie intake is drawn from FAO- ESS Food Security Statistics and complemented with additional information from the National Strategies for Food Security designed by member countries with the support of FAO-TCSF.

Data on production, imports and exports has been taken from national accounting matrices (SAM)², from national statistical offices and the Ministries of Agriculture, Countrystat and FAOSTAT.

The focus food and agricultural commodities identified with criteria i-iv have been classified according to their trade status (i.e., “import”, “export” or “non- traded”). In the present context, a commodity is considered “non-traded” when less than 2.5% of total production is traded (internationally), while it is considered “export” or “import” depending on whether the country is a net exporter or a net importer.

Each chapter opens with the list of selected commodities, followed by a short narrative on food security, food import bill, export value, value of production and data availability, and closes with a second table summarizing the main findings about the criteria. More in depth information on the five criteria is presented in graphs and tables in the Annexes.

¹ These are: Burkina Faso, Kenya, Mali, Tanzania and Uganda.

² Social Accounting Matrices are currently available for: Burkina Faso, Kenya and Tanzania and may be purchased for Mali and Uganda.

1. Burkina Faso

Table 1.1. Proposed focus food and agricultural commodities

Commodity	Type	Share of production value
1. Millet	NON TRADED	14%
2. Sorghum	NON TRADED	13%
3. Maize	NON TRADED	8%
4. Rice	IMPORT	1%
5. Fish	IMPORT	1%
6. Milk	IMPORT	3%
7. Sesame	EXPORT	1%
8. Soybean	EXPORT	1%
9. Shea Butter	EXPORT	1%
10. Cotton	EXPORT	15%
11. Cattle Meat	EXPORT	12%
TOTAL		70%

Food Security

Main staple foods -in terms of consumption and energy intake- in the average diet are millet, sorghum, maize and rice. Together they reach almost 70% of the total value of food consumption (local currency/person/day) and nearly 80% of energy intake (kcal/person/day). On average individuals consume high quantities also of: dolo, fruits, beans, leaf vegetables and onions, and food consumption value is also high for chicken, dolo, oils&butter, beef and beans. Fish is an important source of proteins. (See Figures 1 and 2 and Tables 1 and 2 in Annex 1.)

Food import bill and export value

While domestic production of millet, sorghum and maize exceeds national food needs, rice is to a large extent imported. According to the Ministry of Agriculture, in 2005 around 298,000 tons of rice were consumed in Burkina Faso, 235,000 tons of which were imported, for a 40 billion FCFA bill, that is one- third of the total food import bill. The country is a net importer also of wheat flour, oil, coffee and tea, sugar and dairy products. Around 100,000 – 180,000 tons of cereals are imported every year (especially rice, wheat flour and maize) and 8,000 tons of milk, while 40% of the eggs marketed in the country is estimated to come from abroad. In general, food imports represent around 12% of the total import bill, whereas fuels, diesel oil and fertilizers have a share of over 60%.

About 70% of total export value derives from agricultural exports instead. Key cash crops are: cotton, peanuts, sesame and soy but the main export is by far cotton, which alone accounts for 85% of total export value (121,876.2 millions of FCFA over a total of 143,012.8 in 2005, Ministry of Agriculture). Sesame (4,885.6 millions of FCFA in 2005), shea butter, cattle and cotton derivatives are the next more important exports, accounting for, 2314.3 and 3267.4 respectively.

(See Table 2 and 3 and Figures 3 and 4 in Annex 1).

Value of production

The highest shares of total value of production are recorded for indigenous cattle meat (15%), sorghum (14%), millet (11%), seed cotton (7%) and cotton lint (7%), hen eggs (6%), groundnuts (5%), maize (5%), indigenous chicken meat (4%) and indigenous goat meat (4%), which altogether reach 77% of total production value. (See Figure 5 in Annex 1)

Data Availability

Several value chains have recently been analyzed in the framework of the FAO-TCSP work in policy assistance and ex ante assessments of policy impacts, namely: cattle, fire wood, fish, horticulture, milk, aquaculture, cereals (including rice), gum arabic and milk. Hence, for these commodities production and transport costs, as well as all other data on prices and quantities along the value chain is available. Despite the analyses were conducted at the national level, most of the data used is available broken down by province.

Commodity Selection

For Burkina Faso we propose to consider eleven food and agricultural commodities, namely: millet, sorghum, maize, rice, fish, milk, sesame, soybean, shea butter, cotton and cattle meat. Millet, sorghum, maize and rice are the main staple foods in the country. The first three are mainly non-traded (internationally) and have high production value shares (13%, 13% and 7% respectively). Rice instead represents the main item in the national food import bill, since domestic demand largely exceeds local production (and production value share is only 1%). Cotton has a large share in production value and is the main source of foreign exchange. Sesame, soybean, and shea butter have low shares in production value but are significant exports. Milk, fish and meat are key sources of proteins in the national diet and while the first two are to a large extent imported, the last one is a major source of export revenues. This information is summarized (for all commodities) in Table 1.2 below, while the list of selected commodities is in Table 1.1. at the beginning of this chapter. The cumulated share of total production value of selected commodities is around 70%.

Table 1.2. Information regarding food and agricultural commodities in Burkina Faso

	FOOD CONSUMPTION TOP ITEMS (QUANTITY)	FOOD CONSUMPTION TOP ITEMS (VALUE)	NON TRADED	CASH CROPS	FOOD CROPS	HIGH EXPORT VALUE	HIGH IMPORT VALUE	Data available (full VCA)	Share of Total Prod. Value
Millet	✓	✓	✓		✓			✓	13.1%
Sorghum	✓	✓	✓		✓			✓	13.5%
Maize	✓	✓	✓		✓			✓	7.5%
Rice	✓	✓			✓		✓	✓	0.8%
Beans	✓	✓		✓					0.8%
Sesame				✓		✓			0.5%
Soybean				✓		✓			0.5%
Shea Butter				✓		✓			0.5%
Cotton seed			✓	✓					12.6%
Cotton lint						✓			15.0%
Cattle Meat						✓		✓	11.7%
Hen Eggs								✓	6.0%
Fish								✓	0.7%
Chicken		✓							4.2%
Sheeps and goats		✓				✓			5.2%
Milk								✓	3.0%
Dolo	✓				✓				n/a
TOTAL									95.6%

2. Tanzania

Table 2.1. Proposed focus food and agricultural commodities

Commodity	Type	Share of production value*
1. Cassava	NON TRADED	11%
2. Banana	NON TRADED	8%
3. Sweet Potato	NON TRADED	4%
4. Rice	IMPORT	6%
5. Fish	EXPORT	n/a
6. Maize	IMPORT	8%
7. Cattle Meat	NON TRADED	16%
8. Coffee	EXPORT	n/a
9. Cocoa	EXPORT	n/a
10. Cotton	EXPORT	5%
11. Cashew	EXPORT	2%
12. Tomato	EXPORT	5%
13. Tobacco	EXPORT	2%
TOTAL		68%

*Production value shares are approximated on the basis of the top twenty commodities by production value in FAOSTAT, year 2005

Food Security

Compared to Burkina Faso, the average diet in Tanzania is more varied, in that it includes smaller quantities of a larger number of food items. White maize (flour and grains), rice, beef, tomatoes, fish and sweet potatoes are largely consumed (in value), yet together they cover less than 40% of daily food consumption value. In order to reach over 60% of food consumption value, more than ten more food items need to be added, namely: cassava flour, wheat flour, sardines, cooking bananas, cow milk, sugar, beans, etc. About 50% of daily calorie intake comes from consumption of white maize flour, rice, cassava flour, cooking oils and white maize in grains. (See Figures 1 and 2 and Table 1 in Annex 2).

Food import bill and export value

Cassava and banana, which have large shares in average food consumption, are generally produced for own consumption, whereas large shares of maize and other cereals are imported. Processed foods and beverages also have high shares in the total food import bill. The overall food import bill represents 11% of the total cost of imports to the country.

Instead, over 36% of export revenues comes from agricultural exports and the main agricultural exports are: tobacco (unmanufactured), coffee, cotton lint, tea, and cashew nuts. Fish exports are also significant, as well as forestry and bee products.

Value of production

Commodities with high production value shares are (in descending order): indigenous cattle meat (558,870,000 USD), cassava (377,533,000 USD), bananas (286,085,000 USD), maize (269,771,000 USD), cow milk (223,389,000 USD), paddy rice (215,044,000 USD), beans (188,695,000 USD), cotton lint (187,044,000 USD), fresh vegetables (179,205,000 USD), sweet potatoes (142,175,000 USD). (See Table 3 in Annex 2).

Data availability

To our knowledge, no value chain analysis has been conducted by FAO in Tanzania. However, the MAFAP team has recently started collecting relevant data and has build a database, which includes exchange rates and f.o.b./c.i.f. price, tariffs and border taxes/subsidies from year 2000 to year 2004 for the following commodities: coffee, cotton, wheat, maize, and rice. An average wholesale and retail price is available for cassava (yearly data from 2000 to 2004), whereas data pertaining to the supply-utilization account is available for millet and sorghum. Production costs, as well as transport and processing costs are currently not available.

Monthly wholesale (Dar-es-salaam) prices are available for beans, maize and rice (from 2006 to 2010) and for wheat, sorghum and millet (from 2009 to 2010).

Additional data for coffee (such as yearly retail prices from 2000 to 2008) are available at <http://www.ico.org/historical.asp>.

The Distorsions to Agricultural Incentives (DAI) Project constructed most wholesale and retail prices of cash crops (coffee, cotton, tea, tobacco, cashew nuts, sisal and pyrethrum) applying estimated mark ups on producers prices. For non-traded food crops and importable food crops, data on marketing margins were taken from Eskola (2005) and Kweka (2006), whereas for cash crops this information was drawn from Kweka (2006) and World Bank (1994). The work of Kweka (2005) was also taken as the basis to calculate transport costs.

Commodity Selection

For Tanzania, we propose to select key food items in the national diet, such as: cassava, banana, sweet potato, rice and maize. The first three are mainly non-traded and have production value shares that range from 10%-8% (cassava and banana) to 4% (sweet potato), whereas rice and maize are domestically produced as well as imported, and their production value shares range between 6%-8%. We also suggest that main sources of foreign exchange, such as: tobacco, coffee, cotton, cocoa, cashew nuts, fish, and tomato be part of the selected commodities. Lastly, cattle meat, which is not internationally traded, but is a fundamental source of proteins in the local diet and represents over 16% of the total production value of the agricultural sector, shall also be considered. These commodities jointly reach 68% of the total value of production and are listed in Table 2.1. Information regarding relevance for food security, food import bill and export revenues is summarized for a wider set of commodities in Table 2.2.

Table 2.2. Information regarding food and agricultural commodities in Tanzania

	FOOD CONSUMPTION TOP ITEMS (QUANTITY)	FOOD CONSUMPTION TOP ITEMS (VALUE)	NON TRADE D	CASH CROPS	FOOD CROPS	HIGH EXPORT VALUE	HIGH IMPORT VALUE	Data available (full VCA)	Share of Total Prod. Value
Cassava	✓		✓		✓				10.93%
Banana	✓		✓		✓				8.28%
Sweet Potato	✓		✓		✓				4.12%
Maize	✓	✓			✓		✓		7.81%
Rice	✓	✓			✓		✓		6.23%
Coffee				✓		✓			n/a
Cashew				✓		✓			1.71%
Cocoa				✓		✓			n/a
Cotton				✓		✓			5.42%
Tobacco				✓		✓			2.48%
Milk									6.47%
Forestry		✓		✓		✓			n/a
Bee prod.				✓		✓			n/a
Tomato	✓	✓							5.19%
Meat		✓	✓						16.18%
Fish		✓				✓			n/a
Beans			✓						5.46%
TOTAL									80.28%

3. Kenya

Table 3.1. Proposed focus food and agricultural commodities

Commodity	Type	Share of production value
1. Maize	NON TRADED	11%
2. Sugarcane	NON TRADED	3%
3. Wheat	IMPORT	2%
4. Cattle Meat&Dairy	EXPORT	12%
5. Coffee	EXPORT	3%
6. Tea	EXPORT	14%
7. Cut flower	EXPORT	5%
8. Beans	EXPORT	3%
9. Vegetables	EXPORT	13%
10. Fruits	EXPORT	4%
TOTAL		70%

Food Security

In 2003, key items of average daily food consumption in Kenya included: milk, maize (grains and flour), cooking banana, kale, sugar, beans and beef. Over half of the national average daily calorie consumption- which in Kenya is particularly low (around 1744 calories) - derived from consumption of maize (flour and grains), sugar, and beans. (See figure 1 and 2 in Annex 3).

Food import bill and export value

In 2003, over 45% of the total export value was due to agricultural exports, whereas food imports represented only 6% of the total import bill. With respect to food and agricultural commodities, Kenya is a net exporter of: tea, coffee, cut flowers, beverages&tobacco, pulses&oil seeds, and a net importer of manufactured foods, wheat, rice, maize and sugar. In 2003, tea exports stood at 50,071.34 millions of KES, representing almost 18% of the total value of exports and 40% of the value of agricultural exports. The value of cut flower exports amounted to 21,666.71 millions of KES, 8% of total value of exports, and more recent data (HODA Annual Statistics, 2009) point out that in the last decade Kenya has registering a dramatic increase in cut flowers exports, and has become a leading exporter of flowers worldwide, overtaking Israel, Colombia and Ecuador. Kenya is a net exporter of meat&dairy products, which in 2003 provided around 12% of total agricultural export revenues (15,325.15 millions KES). Coffee exports were valued 12846.49 millions of KES in 2003, thus over 4% of the total value of exports. Vegetables and fruits are ranked 8th and 10th in the top ten agricultural commodities by export value. However, Muendo, Tschirley and Weber (2004) show that exports remain a small fraction of Kenya's overall horticultural sector, and that the total value of domestically traded fruits and vegetables is about three times the value of exported fruits and vegetables. In the same year, the disbursement for the food import bill was 25,720 millions of KES, and one-third was due to wheat imports, amounting to around 10,067.35 millions of KES. With the addition of rice imports, which amounted 4917.13 millions of KES, 83% of the cost of the food import bill is reached. Many food items are to a large extent home consumed, such as: poultry, dairy products, roots and tubers, sheep-goats- lambs and maize.

(See Figures 3, 4 and 5 and Table 2 in Annex 3).

Value of production

The following commodities have the largest shares of total production value –in descending order-: tea (14%), cow milk (14%), maize (11%), indigenous cattle meat (10%), potatoes (9%), sweet potatoes (5%), beans (3%) and sugarcane (3%) and indigenous chicken meat (3%), for a total of 72% of the total value of production. Vegetables account for 12.56% and fruits for 4.23%. (See Figure 6 in Annex 3).

Data availability

In the framework of the FAO-TCSP work in policy assistance and ex ante assessments of policy impacts, the following value chains are being analyzed: cow milk, cotton, sugar and mango. Thus, the full price decomposition is available for the year of reference (2009). Data is available broken down by province.

The MAFAP team has so far collected data on exchange rates, and f.o.b./c.i.f. price, tariffs and border taxes/subsidies from year 2000 to year 2004 for the following commodities: maize, wheat, rice and coffee. The supply- utilization account from 2000 to 2009 is available in the MAFAP database with respect to sorghum, millet, wheat, maize and rice (from FAOSTAT).

Yearly producer prices (from 2000 to 2006) have been collected for: tea, coffee, rice and sorghum. Monthly wholesale prices in different markets are available for beans (from 2006 to 2010), for maize (from 2008 to 2010), and for rice, wheat, millet and sorghum (from 2009 to 2010) at <http://www.ratin.net/priceinfo.asp>.

Concerning maize and wheat, the Distorsions to Agricultural Incentives (DAI) Project drew data on transport costs from Jayne, Myers and Nyoro (2005) and on marketing margins since the early 1990's from various Tegemeo publications. With respect to coffee, the DAI Project relied on Person et al. (1994) for marketing margins (computed with reference to the year 1989), whereas costs of marketing and light processing were taken from World Bank (2005). The DAI Project used the processing costs of coffee calculated in Pearson (1994) also to approximate processing costs of tea from 1976 to 2000. Some sort of “efficient” (or “best practice”) marketing margins from 1980 onwards was estimated from actual average costs between 2000 and 2005.

Commodity Selection

As summarized in Table 3.1., we propose to select commodities of high relevance for food security, such as: milk, maize, wheat, cattle meat&dairy products, as well as key earners of foreign exchange to the country, such as: tea, coffee, and cut flowers. Based on their contribution to the average diet and increasing importance as exports, beans, vegetables and fruits have also been selected. The cumulated share of production value of the above commodities is 70%. Information regarding food security, trade, and production for a wider set of commodities is summarized in Table 3.2. below.

Table 3.2. Information regarding food and agricultural commodities in Kenya

	FOOD CONSUMPTION TOP ITEMS (QUANTITY)	FOOD CONSUMPTION TOP ITEMS (VALUE)	NON TRADED	CASH CROPS	FOOD CROPS	HIGH EXPORT VALUE	HIGH IMPORT VALUE	Data available (full VCA)	Share of Total Prod. Value
Milk	✓	✓					✓	✓	13.75%
Maize	✓	✓	✓		✓				10.76%
Banana	✓	✓							1.61%
Rice	✓	✓			✓		✓		0.35%
Wheat	✓						✓		2.31%
Beans	✓	✓							3.20%
Coffee				✓		✓			2.50%
Tea				✓		✓			14.04%
Cotton lint				✓		✓		✓	0.11%
Sugarcane			✓	✓				✓	3.13%
Cut flowers				✓		✓			5.20%
Meat&Dairy	✓	✓				✓	✓		11.82%
Chicken		✓	✓						3.02%
Horticulture	✓	✓		✓					12.56%
Sweet Potatoes	✓		✓						5.00%
Fruits									4.23%
TOTAL									93.59%

4. Uganda

Table 4.1. Proposed focus food and agricultural commodities

Commodity	Type	Share of production value *
1. Cassava	NON TRADED	10%
2. Sweet Potato	NON TRADED	7%
3. Matooke (plantains)	NON TRADED	39%
4. Rice	IMPORT	n/a
5. Wheat	IMPORT	n/a
6. Maize	IMPORT	3%
7. Fish	EXPORT	n/a
8. Coffee	EXPORT	3%
9. Cocoa	EXPORT	n/a
10. Cotton	EXPORT	n/a
11. Meat	NON TRADED	6%
TOTAL		68%

*To estimate these shares, the value of production of the first twenty commodities by production value has been taken as a proxy for total production value. Data is taken from FAOSTAT 2010 and refer to 2005.

Food Security

Uganda has a variety of agro-climatic zones, and diet varies accordingly. In general, food consumption (grams/person/day) is very high in matooke (plantains), sweet potatoes, cassava, and milk. The same food commodities are of primary importance in terms of calorie intake, with the addition of beans and beef meat. (See Table 1 and Figures 1 and 2 in Annex 4)

Food import bill and commodity export value

The main source of foreign exchange to the country is coffee, which alone accounted for over one-third of total export value in 2005³. Historically, the share of coffee on total export revenues has been around 80% in the 1980's and then decreased to around 20% in later years and stood to 42% in 2009. Following coffee, large shares of total export value come from fish and fish products, tea, tobacco, cotton and cut flowers, which together represented over 80% of the total export value in 2005. Maize (around 4%) and cocoa beans (around 2% in 2005 and around 4% in 2009) too have significant shares of production value and maize is particularly relevant in regional trade.

About 34% of the overall food import bill was due to wheat imports in 2005 in Uganda, and over 13% due to palm oil imports. The country also imports large quantities of dry peas, sugar, sorghum, maize, and rice. Key foods in the local diet -such as sweet potatoes, millet, and cassava- are not traded internationally, but mainly produced for home consumption or traded domestically. (See Figures 3 and 4 and Table 2 in Annex 4)

³ FAOSTAT, 2005.

Value of production

Matooke (Plantains), cassava, sweet potatoes, indigenous cattle meat, cow milk, beans, sesame, coffee, maize and millet represent the largest shares in total production value⁴. (See Table 3 in Annex 4).

Data availability

The MAFAP team has so far collected data on exchange rates, and f.o.b./c.i.f. price, tariffs and border taxes/subsidies from year 2000 to year 2004 for maize (processed) and the f.o.b./c.i.f. prices from 2000 to year 2004 for rice (processed). The supply- utilization account from 2000 to 2009 is available in the MAFAP database with respect to maize, sorghum, millet, wheat, and rice (from FAOSTAT).

Monthly wholesale prices from 2006 to 2010 are available for beans (Kampala and Lira wholesale markets), for maize (in Kampala, Lira and Mbale wholesale markets) and for rice (Kampala wholesale market). Monthly wholesale prices (Kampala) are also available for sorghum and millet from 2009 to 2010 at <http://www.ratin.net/priceinfo.asp>.

Monthly prices from 1997 to 2006 on the main markets are available on the Ministry of Agriculture website (<http://www.agriculture.go.ug/docs/Food%20Price%20Data.xls>) for: matooke, sweet potatoes, cassava, maize and other products.

Transaction costs are estimated for the value chains of: coffee, cotton, fish, maize, cassava and dairy products in a 2002 study by NRI/IITA.

Cotton lint production, average FOT price, seed cotton price announced by CDO, average farm gate price and percentage of world price received by farmers are available with reference to the 1995-2008 period on the Cotton Development Organization⁵ (CDO) Website http://cdouga.org/index.php?option=com_content&task=view&id=18&Itemid=9

Commodity Selection

As for the other MAFAP pilot countries, the target 70% of total production value may be reached for Uganda taking in commodities that are either key in the local food consumption pattern (hence assumed as relevant for food security), or which represent a substantial source of revenues. More specifically, we propose to select eleven food and agricultural commodities, listed in Table 4.1., which include largely consumed foods, such as cassava, plantains, sweet potatoes, and meat, and also major agricultural exports, such as: fish products, coffee, cocoa, and cotton. Wheat and rice are also included as they are main food imports. The cumulated share of production value of these commodities is about 68%.

Information on food security, trade and production value shares for a larger set of commodities is summarized in Table 4.2. below.

⁴ Due to data constraints, the value of production of the first twenty commodities has been used as a proxy for the total value of production.

⁵The CDO was established in 1994 to promote development of the cotton industry and carry out regulatory activities.

Table 4.2. Information regarding food and agricultural commodities in Uganda

	FOOD CONSUMPTION TOP ITEMS (QUANTITY)	FOOD CONSUMPTION TOP ITEMS (VALUE)	NON TRADED	HIGH EXPORT VALUE	HIGH IMPORT VALUE	Data available (full VCA)	Share of Total Prod. Value
Matooke	✓	✓	✓				38.56%
Maize	✓	✓			✓		3.04%
Millet							2.60%
Cassava	✓	✓	✓				10.30%
Wheat	✓	✓			✓		n/a
Sweet potato	✓	✓	✓				6.71%
Rice					✓		n/a
Coffee				✓			3.31%
Tea				✓			n/a
Cotton				✓			n/a
Sugar				✓			1.14%
Cut flowers				✓			n/a
Tobacco				✓			1.47%
Fish				✓			n/a
Meat		✓	✓				5.62%
Beans	✓	✓		✓			4.86%
Sesame seeds				✓			3.59%
Cocoa beans				✓			n/a
TOTAL							81.20%

5. Mali

Table 5.1. Proposed focus food and agricultural commodities

Commodity	Type	Share of production value
1. Millet	NON TRADED	7%
2. Palm Oil	IMPORT	n/a
3. Rice	IMPORT	9%
4. Exotic fruits	EXPORT	1%
5. Maize	EXPORT	4%
6. Cattle Meat	EXPORT	7%
7. Cotton	EXPORT	19%
8. Fresh Vegetables	EXPORT	10%
9. Milk	IMPORT	5%
10. Sugarcane	NON TRADED	1%
TOTAL		62%

Food Security

The average diet in Mali includes large shares of cereals, especially local husked rice, millet, maize flour and sorghum. Beef meat, sheep meat and lake fish are main sources of proteins, and a number of vegetables, such as tomatoes and onions are largely consumed. (See table 1 and Figures 1 and 2 in Annex 5).

Food import bill and commodity export value

Rice - a key staple food in the country- is mainly grown for home-consumption and not traded internationally. However, production does not suffice domestic demand and large quantities of rice are imported, representing over one-fourth of the total food import bill. Key items in the food import bill are also refined sugar and wheat flour –which together with rice account for about 50% of the total food import bill. Milk, food preparations, other flours, palm oil, and tea are also largely imported. Palm oil represents an erratic source of export revenues as well (942 millions FCFA in 2005, with a peak of over 1.2 billions FCFA in 2006, which fell to 33 millions FCFA the next year and stood at 64 millions FCFA in 2008), yet remains a net import, and its share in the food import bill has tripled from 4% in 2005 to 12% in 2008. In 2005 cereals were the main agricultural exports, followed by palm oil, exotic fruits, maize, millet and tomatoes. The value of exotic fruits exports (which include figs, mangoes, pineapples, and guavas) has steadily increased over the period 2005 – 2008, from 625 millions FCFA in 2005 to over 2 billions in 2008. With a value of over 2 billions, exotic fruits were the main export in 2008. (See Figures 3 and 4 in Annex 5).

Value of production

Around 10% of the total production value stems from fresh vegetables, followed by cotton lint and seed cotton, paddy rice, millet, indigenous cattle and sheep meat, cow milk and chicken meat and maize. Together, these products cover over 70% of the total value of production. The full list of products and their shares of production value is presented in Table 2 of Annex 5.

Data availability

The MAFAP database contains the supply-utilization account of sorghum, millet, maize, rice and wheat over the period 1999-2008 (FAOSTAT data).

Monthly wholesale prices from 2006 to 2010 are available for millet and rice at the wholesale markets of Bamako and Kayes on <http://www.fao.org/giews/pricetool/>.

Price and quantity data are available for coffee at <http://www.ico.org/historical.asp>.

Production costs, as well as transport and processing costs are currently not available.

Commodity Selection

In the light of information on food security, trade and production value, ten commodities seem to be representative of the food and agricultural sector of Mali, namely: rice, millet, maize, palm oil, beef meat, milk, vegetables, exotic fruits (mangoes, guavas, figs and pineapples), cotton and sugarcane. These products include main foods of the average diet, either non-traded (millet and beef meat), imported (rice, palm oil, milk, and sugar) or exported (maize). They also include fundamental sources of foreign exchange, such as: cotton, exotic fruits and vegetables. The cumulated share of production value of these commodities is around 62% and they are listed in Table 5.1.

Information on food security, trade, data availability and production value for a larger group of commodities –from which the focus commodities have been selected- is summarized in Table 5.2. below.

Table 5.2. Information regarding food and agricultural commodities in Mali

	FOOD CONSUMPTION TOP ITEMS (QUANTITY)	FOOD CONSUMPTION TOP ITEMS (VALUE)	NON TRADED	HIGH EXPORT VALUE	HIGH IMPORT VALUE	Data available (full VCA)	Share of Total Prod. Value
Millet	✓	✓					7.41%
Rice	✓	✓			✓		8.83%
Sorghum	✓	✓					3.65%
Wheat	✓	✓			✓		0.04%
Maize	✓	✓			✓		3.94%
Sugarcane			✓				0.52%
Milk	✓	✓			✓		5.01%
Palm oil					✓		n/a
Vegetables							10.26%
Exotic fruits				✓			0.60%
Tea					✓		0.01%
Maize				✓			3.94%
Cotton				✓			18.61%
Peanuts	✓	✓					2.91%
Tomatoes	✓						2.54%
Local beans	✓	✓	✓				0.03%
Sheep meat		✓	✓				5.34%
Beef meat		✓	✓	✓			7.10%
TOTAL							80.74%

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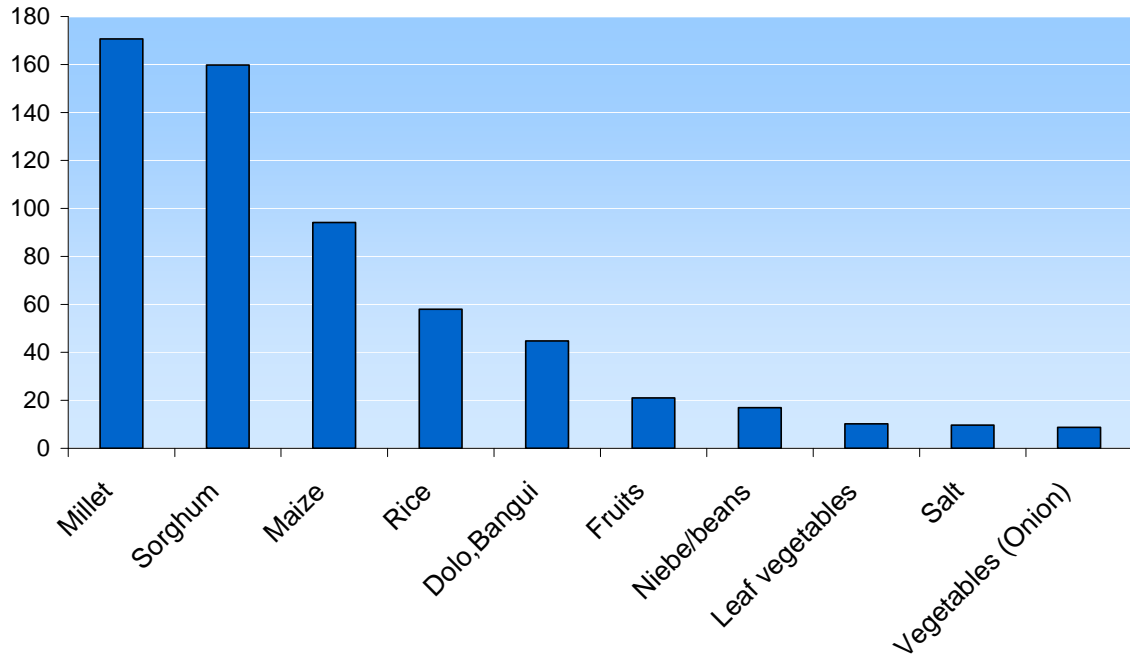
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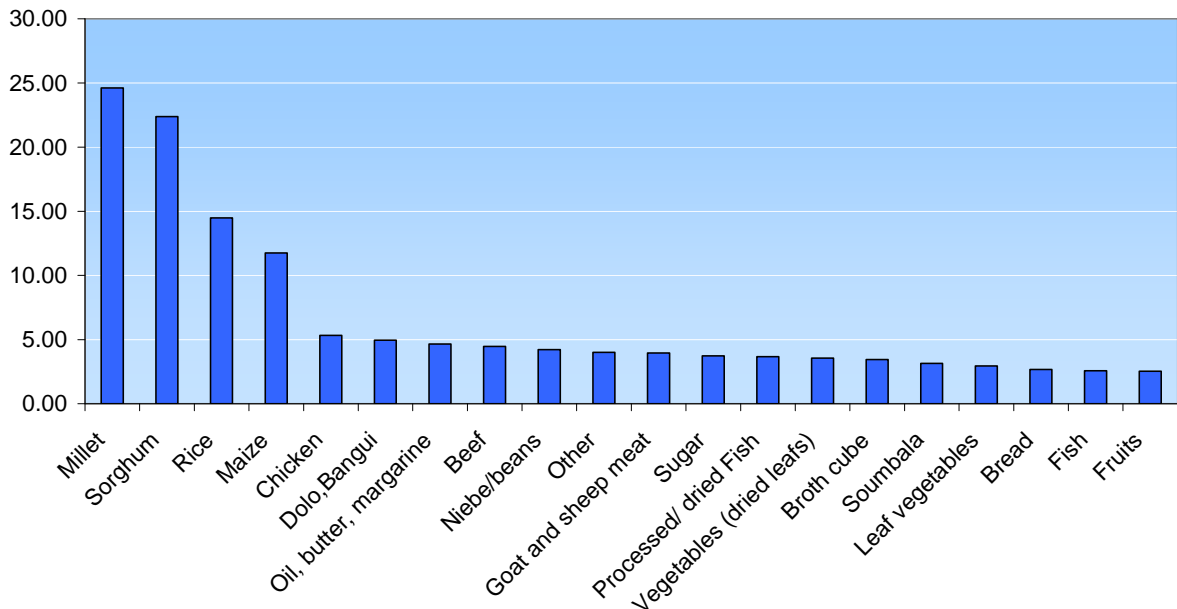
Annex 1: Burkina Faso

Figure 1. Food Quantities Consumed (grs/person/day)



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Figure 2. Food Consumption Value (FCFA/person/day), main items



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Table 1. Monetary value, quantity consumed and dietary energy consumption, year 2003

Monetary value (FCFA/person/day)		Quantity consumed (grams/person/day)		Dietary energy consumption (kcal/person/day)	
1	Millet	24.60	1	Millet	170.66
2	Sorghum	22.37	2	Sorghum	159.75
3	Rice	14.48	3	Maize (cobs)	94.12
4	Maize (cobs)	11.76	4	Rice	57.92
5	Chicken meat	5.33	5	Dolo,Bangui	44.75
subtotal		78.54	subtotal		527.20
%		49%	%		77%
6	Dolo,Bangui	4.95	6	Fruits	21.01
7	Oil, butter and	4.66	7	Niebe/beans	16.92
8	Beef meat	4.47	8	Leafy vegetables	10.12
9	Niebe/beans	4.22	9	Salt	9.63
10	Other food	4.01	10	Vegetables (onion)	8.71
subtotal		100.85	subtotal		593.59
%		63%	%		86%
11	Goat and sheep meat	3.96	11	Peanuts	8.13
12	Sugar	3.73	12	Oil and butter	7.08
13	fish	3.66	13	Canned Tomatoes	6.95
14	Vegetables (dried	3.56	14	Sugar	6.77
15	Broth cubes	3.43	15	Beef meat	6.15
subtotal		119.19	subtotal		628.67
%		74%	%		92%
16	other	41.01	16	other	58.01
total		160.20	total		686.68
			total		2013.61

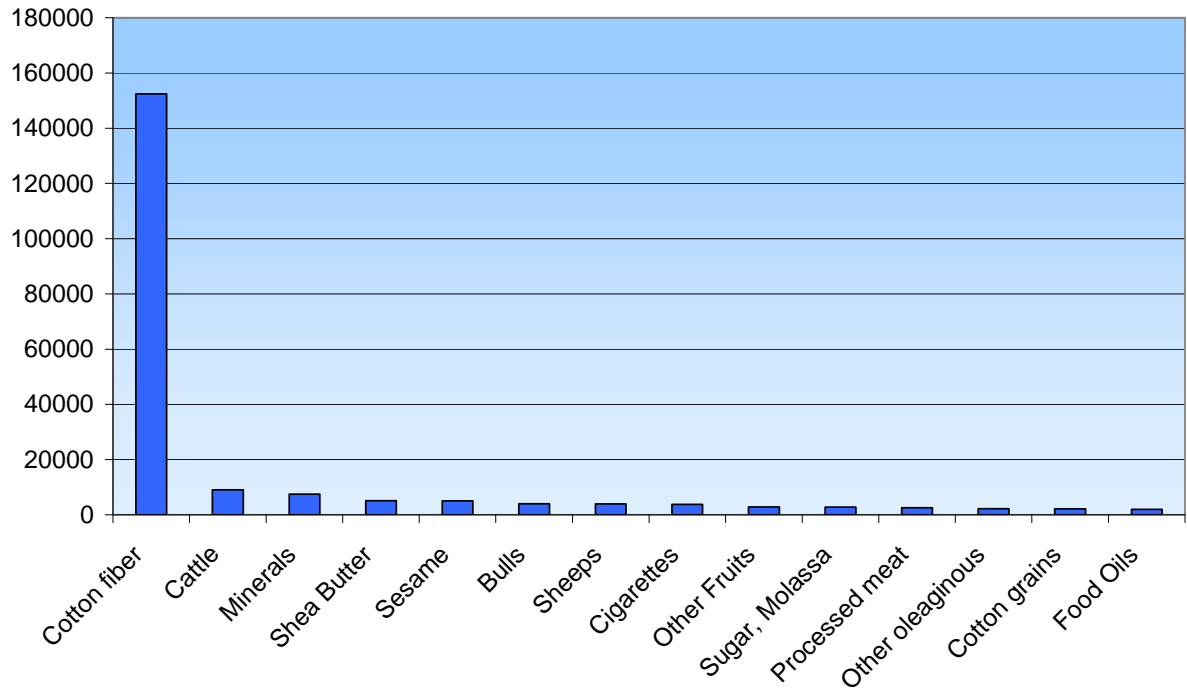
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Table 2. Ex post National Food Balance 2005/2006 (tons)

	Rice	Flour	Millet, sorghum, maize, fonio	Total
Population au 30/04/2006				12 930 067
1. Supply				
Gross Production	93 516	-	3 556 017	3 649 533
Available Production	51 434	-	3 022 614	3 074 048
- Stock at the beginning of the period	300	-	36 783	37 083
- Stock at village level	-	-	22 917	22 917
- Other stocks	300	-	13 866	14 166
Imports	249 299	35 132	26 879	311 310
- Commercial imports	235 444	35 132	5 892	276 467
- Food Aid	13 855	-	20 988	34 843
Total Supply	301 033	35 132	3 086 277	3 422 441
2. Utilization				
Exports	19	1 188	31 369	32 576
Stock at the end of period	2 604	-	230 949	233 553
- Stock at village level			187 963	187 963
- Other stocks	2 604	-	42 986	45 590
3. Total consumption	298 410	33 943	2 823 959	3 156 312
4. Total Consumption per inhabitant (kg)	23,1	2,6	218,4	244,1

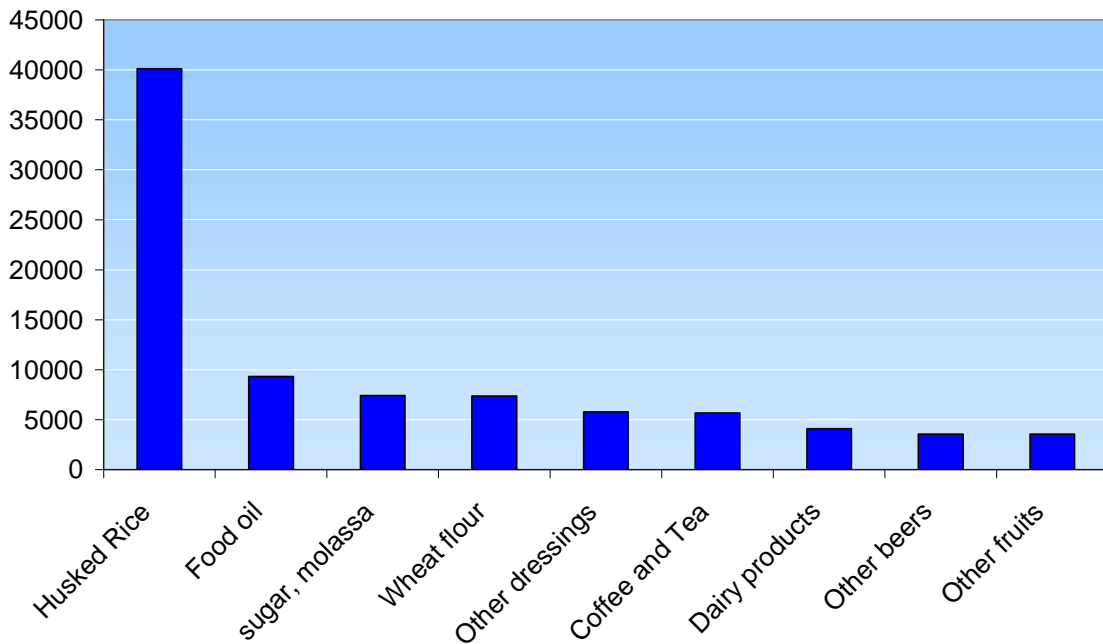
Source: Ministry of Agriculture

Figure 3. Top exports by export value, 2005 (millions FCFA)



Source: authors based on data from the Social Accounting Matrix of Burkina Faso, 2005.

Figure 4. Main items in Import Food Bill, 2005 (millions FCFA)



Source: authors based on the National Accounting Matrix, 2005.

Table 3. Export Value, all products (millions of FCFA)

Commodity	Export value	% tot	% agri tot
Cotton lint	152493.00	53.79	76.24
Zebu	9056.94	3.19	4.53
Mining	7510.00	2.65	-
Financial Services	5813.00	2.05	-
Shea butter	5096.00	1.80	2.55
Sesame	5068.00	1.79	2.53
Metals	4342.00	1.53	-
Bulls	4069.06	1.44	2.03
Ovin	3934.00	1.39	1.97
Cigarettes	3779.00	1.33	-
Other textile products	3154.00	1.11	-
Other fruits	2843.00	1.00	1.42
Extention services	2828.00	1.00	-
Sugare, molassa	2759.00	0.97	1.38
Processed meat	2567.00	0.91	1.28
Public Services	2523.00	0.89	-
Chemical products	2312.00	0.82	-
Transport materials	2271.00	0.80	-
Other oligineouse	2268.00	0.80	1.13
Cotton grain	2173.00	0.77	1.09
Food Oils	2014.00	0.71	1.01
Machinery	1408.40	0.50	-
Textile products	1259.00	0.44	-
Furniture	1032.00	0.36	-
Vouandzou	1021.00	0.36	0.51
Transport Services	694.00	0.24	-
onions and garlic	638.00	0.23	0.32
TV and radio equipments	603.60	0.21	-
Other agricultural commodities	4008.77	1.41	2.00
Other non agricultural commodities	43967.00	15.51	-
All agricultural exports	200008.77	70.55	100.00
Total	283504.77		

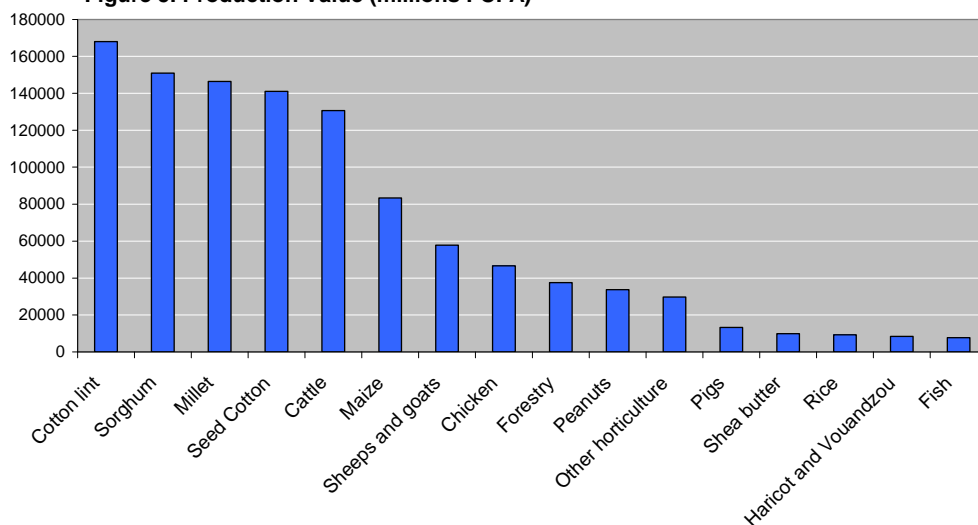
Source: authors based on the Social Accounting Matrix, 2005.

Table 4. Import Value, all products (millions of FCFA)

Commodity	Import value	% tot	% food import bill
Petrol	131678.03	17.41	-
Chemical products	104476.35	13.81	-
Machinery	75755.94	10.02	-
Transport materials	61586.00	8.14	-
Metals	48269.97	6.38	-
Riz décortiqué	40126.00	5.31	44.80
Costruction materials	37575.03	4.97	-
TV and radio equipments	24068.10	3.18	-
Transport Services	21981.00	2.91	-
Travaux de construction	15153.98	2.00	-
Other tobacco products	15037.00	1.99	-
Food Oils	9321.00	1.23	10.41
Paper products	8842.01	1.17	-
Textile products	8545.80	1.13	-
Electricity and gas	8086.00	1.07	-
Extention services	7491.00	0.99	-
Sugar, molassa	7410.00	0.98	8.27
Wheat Flour	7360.00	0.97	8.22
Public Services	6839.00	0.90	-
caoutchouc and plastic products	6640.70	0.88	-
Furniture	5991.05	0.79	-
Other dressings	5786.00	0.76	-
Processed teas and coffee	5668.00	0.75	-
Soaps	5465.05	0.72	-
Dairy products	4100.00	0.54	4.58
Apparel	3683.00	0.49	-
Other beers	3559.00	0.47	3.97
Other fruits	3558.00	0.47	3.97
Other agricultural commodities	18227.66	2.41	20.35
Other non agricultural commodities	54065.20	7.15	-
Food import bill	89561.66	11.84	100.00
Total	756345.9	100.0	-

Source: authors based on the Social Accounting Matrix, 2005.

Figure 5. Production Value (millions FCFA)



Source: authors based on the Social Accounting Matrix, 2005.

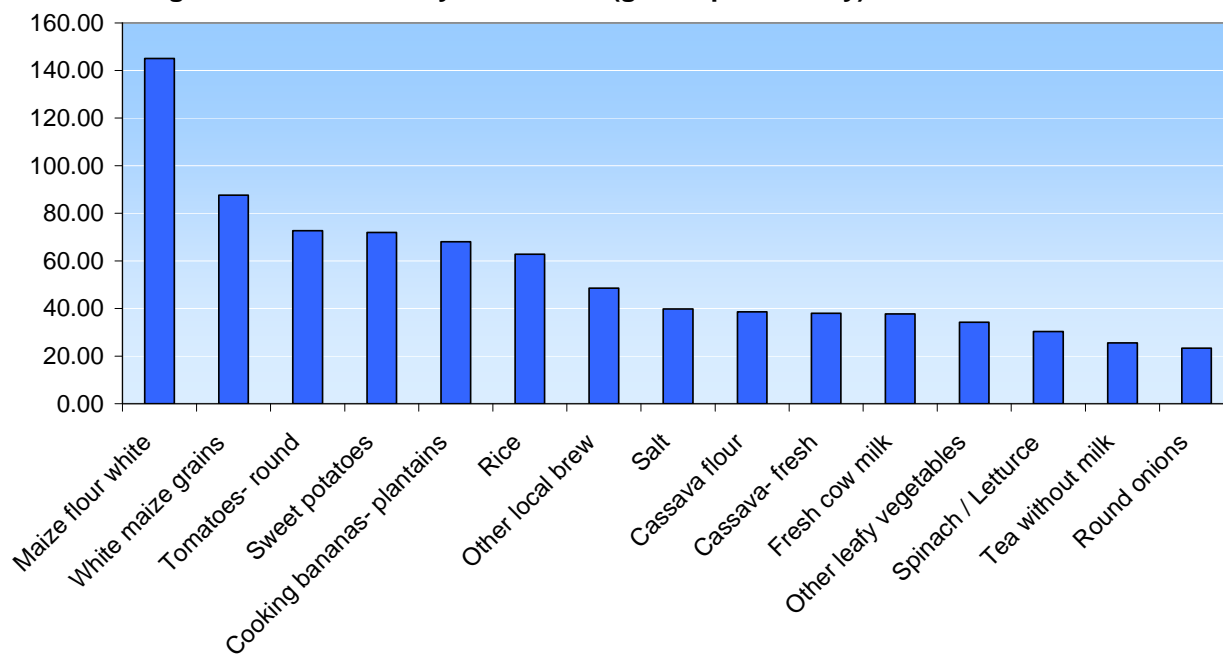
Table 5. Production value in year 2005

Rank	Commodity	Production value (millions FCFA)	Share in production value
1	Cotton lint	167990.87	15.0%
2	Sorghum	150942.91	13.5%
3	Millet	146421.37	13.1%
4	Cotton seed	141135.94	12.6%
5	Cattle	130678.93	11.7%
6	Maize	83373.09	7.5%
7	Sheeps and goats	57789.38	5.2%
8	Chicken	46687.7	4.2%
10	Forestry	37513.2	3.4%
11	Peanuts	33660.94	3.0%
12	Other horticulture	29723.08	2.7%
14	Pigs	13227.7	1.2%
9	Shea butter	9907.69	0.9%
13	Rice	9239.38	0.8%
15	Haricot and Vouandzou	8387.50	0.8%
16	Fish	7754.4	0.7%
17	Onion and Garlic	5897.25	0.5%
18	Cassava and yams	5433.75	0.5%
19	Sasame	5264.81	0.5%
20	Soya	5264.81	0.5%
21	Tomato	5152.46	0.5%
22	Mangoes	3865.81	0.3%
23	Other fruits	3615.89	0.3%
24	Other crops	3591.16	0.3%
25	cashew nuts	1305.42	0.1%
26	Haunting	1079.5	0.1%
27	Fonio	858.02	0.1%
28	Camels	574.54	0.1%
29	Other meat	277.00	0.0%
	TOTAL	1116614.54	100.0

Source: authors based on the Social Accounting Matrix, 2005.

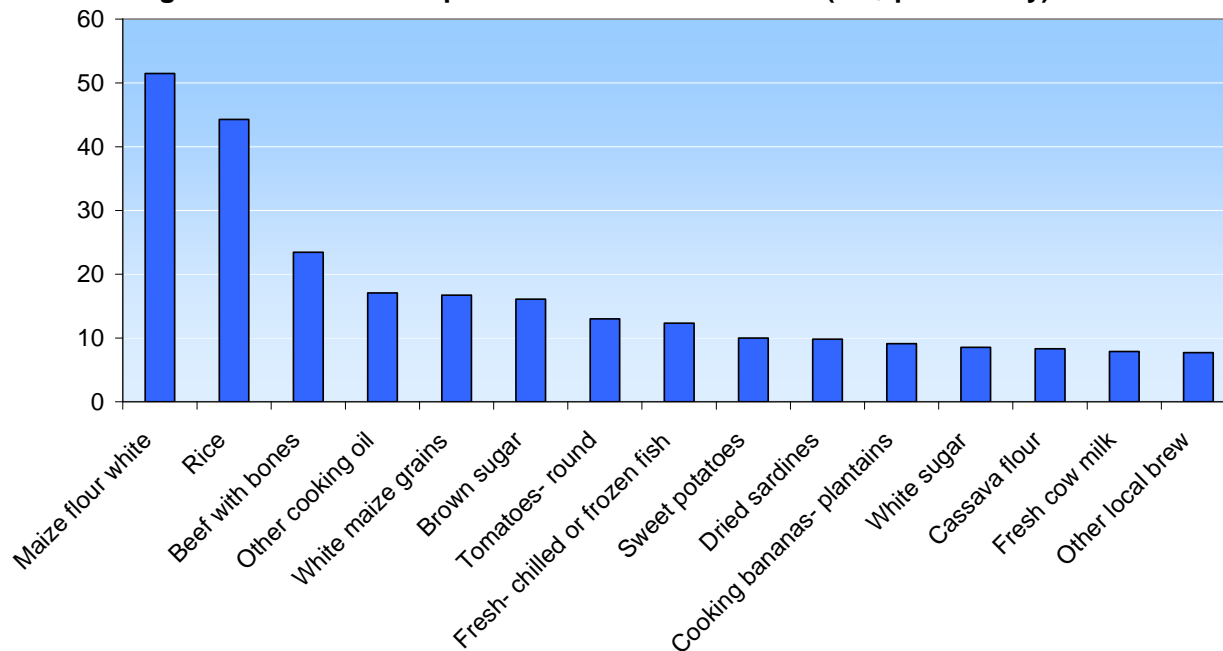
Annex 2: Tanzania

Figure 1. Food Quantity Consumed (grams/person/day): main food items



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2007)

Figure 2. Food Consumption value: main food items (LC\$/person/day)



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2007)

Table 1. Monetary value, quantity consumed and dietary energy consumption, year 2007

Monetary value (LC\$/person/day)		Quantity consumed (grams/person/day)		Dietary energy consumption (kcal/person/day)				
1	Maize flour white	51.46	1	Maize flour white	145.10	1	Maize flour white	515.36
2	Rice	44.26	2	White maize grains	87.60	2	Rice	219.14
3	Beef with bones	23.43	3	Tomatoes- round	72.70	3	Cassava flour	121.94
4	Other cooking oil	17.08	4	Sweet potatoes	72.00	4	Other cooking oil	87.99
5	White maize grains	16.73	5	Cooking bananas- plantains	68.00	5	White maize grains	82.52
	subtot	152.96		subtot	445.40		subtot	1026.95
	%	33%		%	25%		%	50%
6	Brown sugar	16.11	6	Rice	62.80	6	Brown sugar	56.83
7	Tomatoes- round	13.02	7	Other local brew	48.60	7	Cooking bananas- plantains	55.35
8	Fresh- chilled or frozen fish	12.32	8	Salt	39.80	8	Sweet potatoes	51.32
9	Sweet potatoes	10.02	9	Cassava flour	38.60	9	Broad beans	47.02
10	Dried sardines	9.80	10	Cassava- fresh	38.00	10	Cassava- fresh	43.59
	subtot (cumulative)	214.23		subtot (cumulative)	673.20		subtot (cumulative)	1281.06
	%	46%		%	38%		%	62%
11	Cooking bananas- plantains	9.12	11	Fresh cow milk	37.70	11	Sorghum- flour	38.32
12	White sugar	8.55	12	Other leafy vegetables	34.20	12	Coconut (un husked)	35.18
13	Cassava flour	8.30	13	Spinach / Lettuce	30.30	13	White sugar	29.20
14	Fresh cow milk	7.89	14	Tea without milk	25.60	14	Beef with bones	25.80
15	Other local brew	7.71	15	Round onions	23.30	15	Other local brew	23.48
	subtot (cumulative)	255.80		subtot (cumulative)	824.30		subtot (cumulative)	1433.04
	%	55%		%	46%		%	70%
16	Wheat flour	7.27	16	Dried sardines	18.90	16	Fresh cow milk	22.78
17	Broad beans	7.24	17	Fresh- chilled or frozen fish	18.60	17	Buns	22.51
18	Other leafy vegetables	7.19	18	Sugar canes	15.60	18	Soya beans	22.10
19	Beans- dry	7.04	19	Green maize cob	14.80	19	Other leafy vegetables	20.63
20	Buns	6.61	20	Brown sugar	14.50	20	Cassava dry	20.01
	subtot (cumulative)	291.15		subtot (cumulative)	906.70		subtot (cumulative)	1541.07
	%	62%		%	51%		%	75%
21	Other	174.82	21	Other	883.90	21	Other	511.09
	total	465.97		total	1790.60		total	2052.16

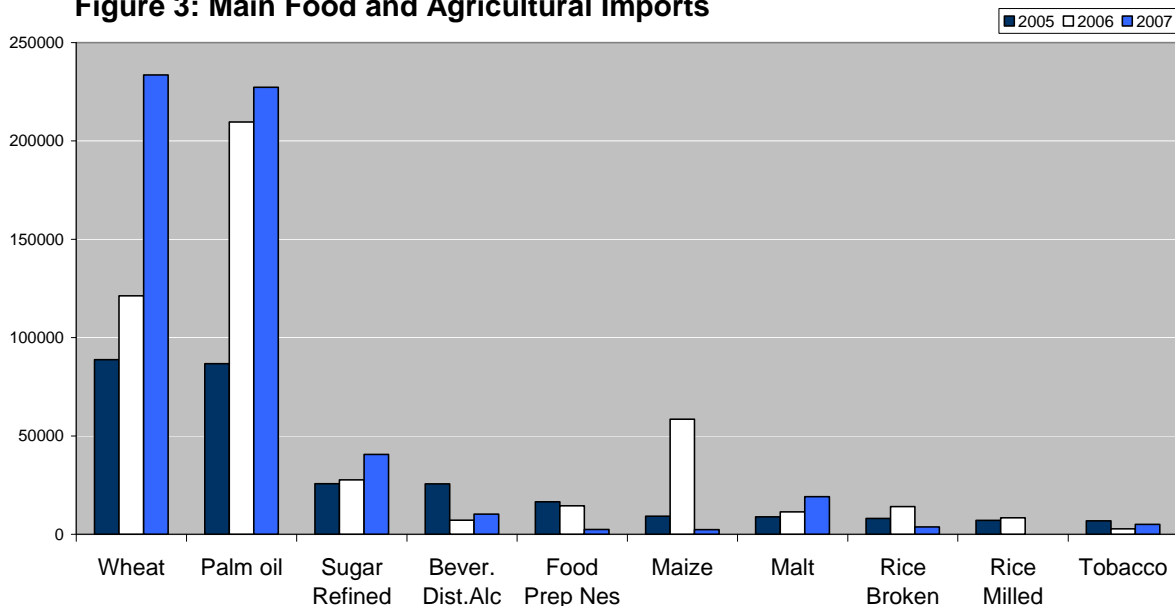
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2007)

Table 2. Export and Import Value (millions of LC\$)

Commodity	Export Value	% TOT	% AGRI TOT	Commodity	Import Value	% TOT	% food import bill
beans	1.056	0.081	0.234	beans	0.022	0.001	0.010
beverages	1.228	0.094	0.272	beverages	16.469	0.827	7.195
cashew nuts	93.551	7.163	20.723	cashew nuts	0.000	0.000	0.000
cassava and other roots	0.000	0.000	0.000	cassava and other roots	0.002	0.000	0.001
coffee	94.947	7.270	21.032	coffee	0.007	0.000	0.003
constructions	0.000	0.000		constructions	2.371	0.119	-
hunting and fishing	70.649	5.410	15.650	hunting and fishing	0.654	0.033	0.286
other grains	6.768	0.518	1.499	other grains	15.510	0.779	6.776
hotels and tourism	0.000	0.000		hotels and tourism	0.000	0.000	0.000
other livestock	6.443	0.493	1.427	other livestock	2.812	0.141	1.229
maize	1.048	0.080	0.232	maize	16.249	0.816	7.099
meat	0.595	0.046	0.132	meat	3.888	0.195	1.698
mining sector	19.895	1.523		mining sector	13.325	0.669	-
other cash crops	133.289	10.206	29.526	other cash crops	50.878	2.555	22.228
other cereals	2.849	0.218	0.631	other cereals	40.761	2.047	17.808
other crops	4.494	0.344	0.995	other crops	0.110	0.006	0.048
fruits and vegetables	27.513	2.107	6.095	fruits and vegetables	7.945	0.399	3.471
other secondary sectors	42.716	3.271		other secondary sectors	1259.795	63.257	-
other services	142.115	10.882		other services	94.531	4.747	-
processed foods	7.004	0.536	1.552	processed foods	73.580	3.695	32.147
transports	578.569	44.301		transports	392.648	19.716	-
TOT	1234.728			TOT	1991.557		
total agricultural exports	451.433	36.561	100.000	total food import bill	228.887	11.493	100.000

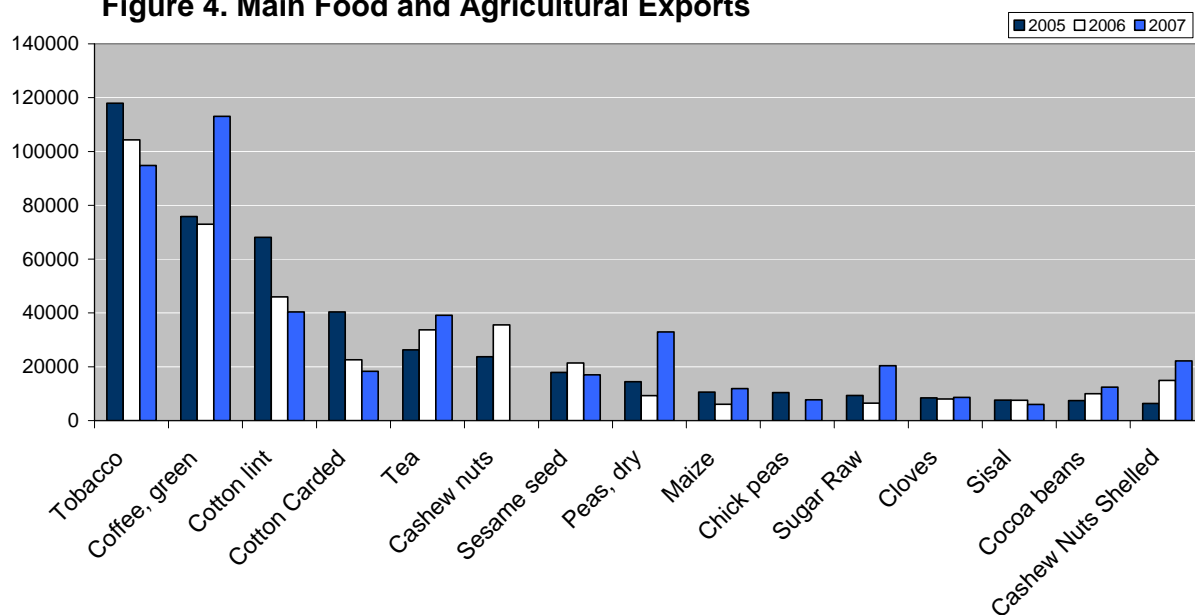
Source: authors based on the National Accounting Matrix, 2003

Figure 3: Main Food and Agricultural Imports



Source: authors based on FAOSTAT, 2010

Figure 4. Main Food and Agricultural Exports



Source: authors based on FAOSTAT, 2010

Table 3. Production Value in year 2005

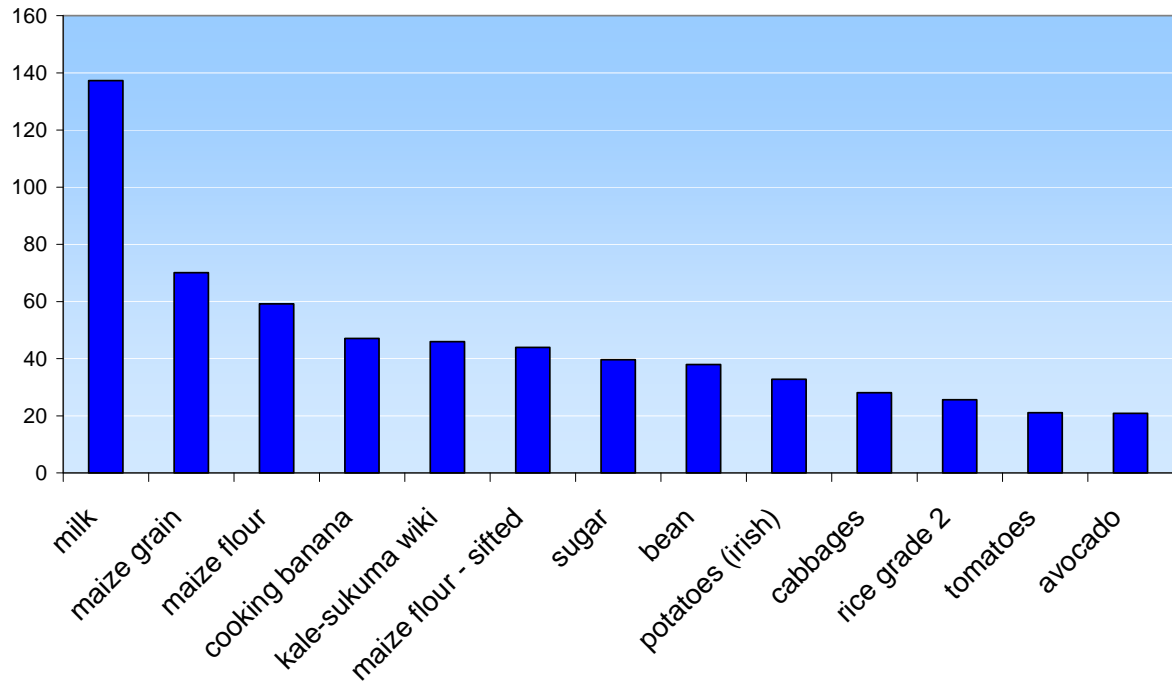
Rank	Commodity	Production (Int \$1000)	Production (MT)	shares (Int \$1000)*
1	Indigenous Cattle Meat	558870	270210	16.18
2	Cassava	377533	5539160	10.93
3	Bananas	286085	2007480	8.28
4	Maize	269771	3131610	7.81
5	Cow milk, whole, fresh	223389	840000	6.47
6	Rice, paddy	215044	1167692	6.23
7	Beans, dry	188695	450000	5.46
8	Cotton lint	187044	126000	5.42
9	Vegetables fresh nes	179205	955000	5.19
10	Sweet potatoes	142175	1414820	4.12
11	Groundnuts, with shell	139400	293870	4.04
12	Plantains	130424	600000	3.78
13	Potatoes	90135	651010	2.61
14	Mangoes, mangosteens, guavas	87656	360000	2.54
15	Tobacco, unmanufactured	85691	47000	2.48
16	Sorghum	78490	729740	2.27
17	Indigenous Chicken Meat	59538	51044	1.72
18	Cashew nuts, with shell	59119	89980	1.71
19	Sesame seed	48122	55000	1.39
20	Natural honey	47056	27000	1.36
	TOT	3453442.00	18806616.00	100.00

Source: FAOSTAT, 2010

*Production value shares are approximated by the authors on the basis of the top twenty commodities by production value in FAOSTAT, year 2005

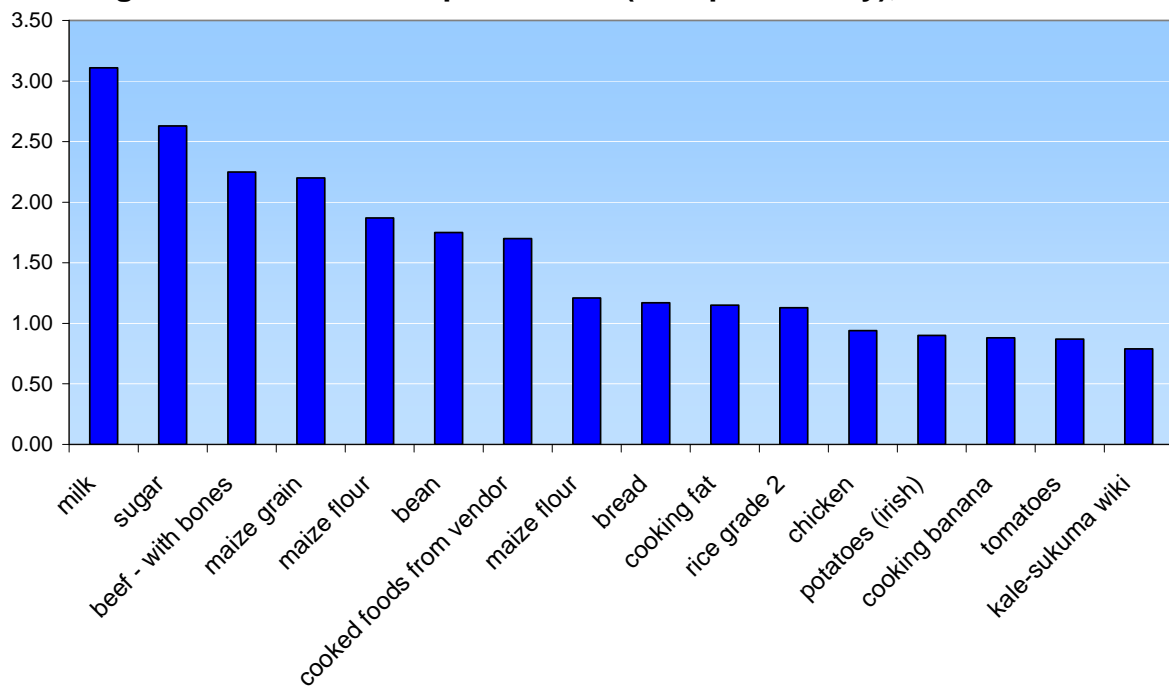
Annex 3: Kenya

Figure 1. Food Quantity Consumed (grs/person/day), 2003



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Figure 2. Food Consumption Value (KES/person/day), 2003



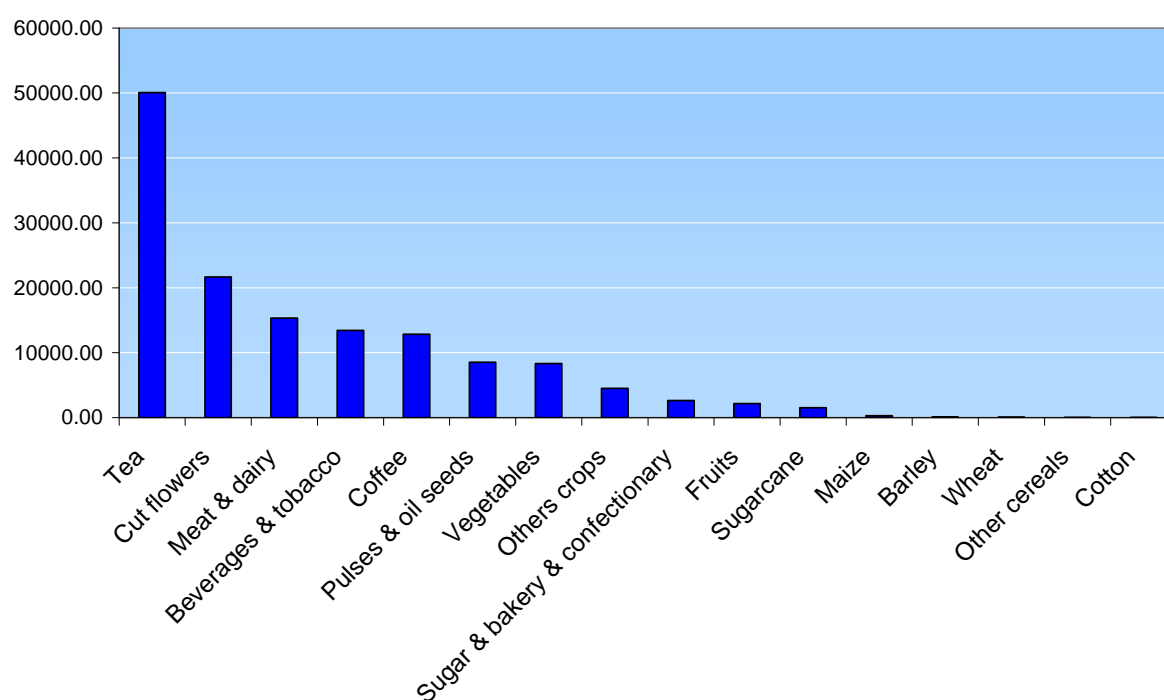
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Table 1. Monetary value, quantity consumed and dietary energy consumption, year 2007

Monetary value (KES/person/day)		Quantity consumed (grams/person/day)		Dietary energy consumption (kcal/person/day)	
1	milk	3.11	1	milk	137.27
2	sugar	2.63	2	maize grain	70.05
3	beef - with bones	2.25	3	maize flour	59.15
4	maize grain	2.20	4	cooking banana	47.05
5	maize flour	1.87	5	kale-sukuma wiki	45.93
subtotal		12.06	subtotal		359.45
%		30%	%		38%
6	bean	1.75	6	maize flour - sifted	43.97
7	cooked/prepared foods fro	1.70	7	sugar	39.63
8	maize flour - sifted	1.21	8	bean	37.92
9	bread	1.17	9	potatoes (irish)	32.78
10	cooking fat	1.15	10	cabbages	28.06
subtotal		19.04	subtotal		541.81
%		48%	%		57%
11	rice grade 2	1.13	11	rice grade 2	25.63
12	chicken	0.94	12	tomatoes	21.09
13	potatoes (irish)	0.90	13	avocado	20.89
14	cooking banana	0.88	14	green maize	20.78
15	tomatoes	0.87	15	bread	20.08
subtotal		23.76	subtotal		650.28
%		59%	%		69%
16	other	16.32	16	other	294.67
total	40.08	total	944.95	total	1744.47

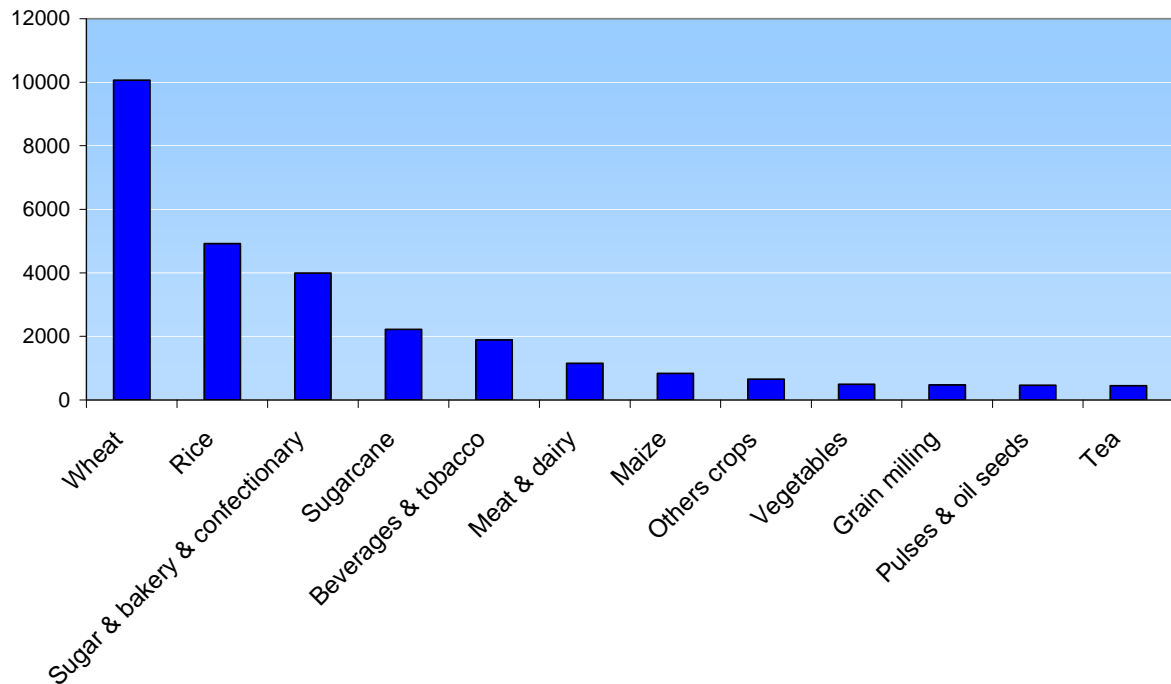
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Figure 3. Export Value, 2003 (millions of KES)



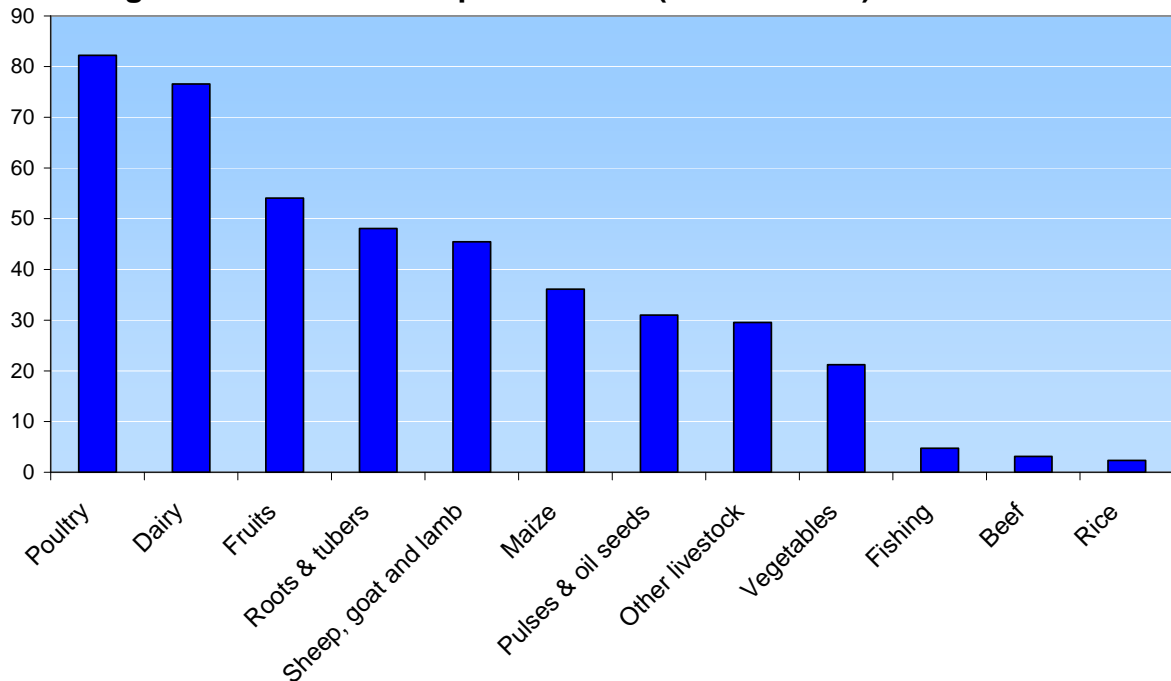
Source: authors based on the 2003 SAM of Kenya.

Figure 4. Food Import Bill, 2003 (millions KES)



Source: authors based on the 2003 SAM of Kenya.

Figure 5. Home consumption shares (millions KES)



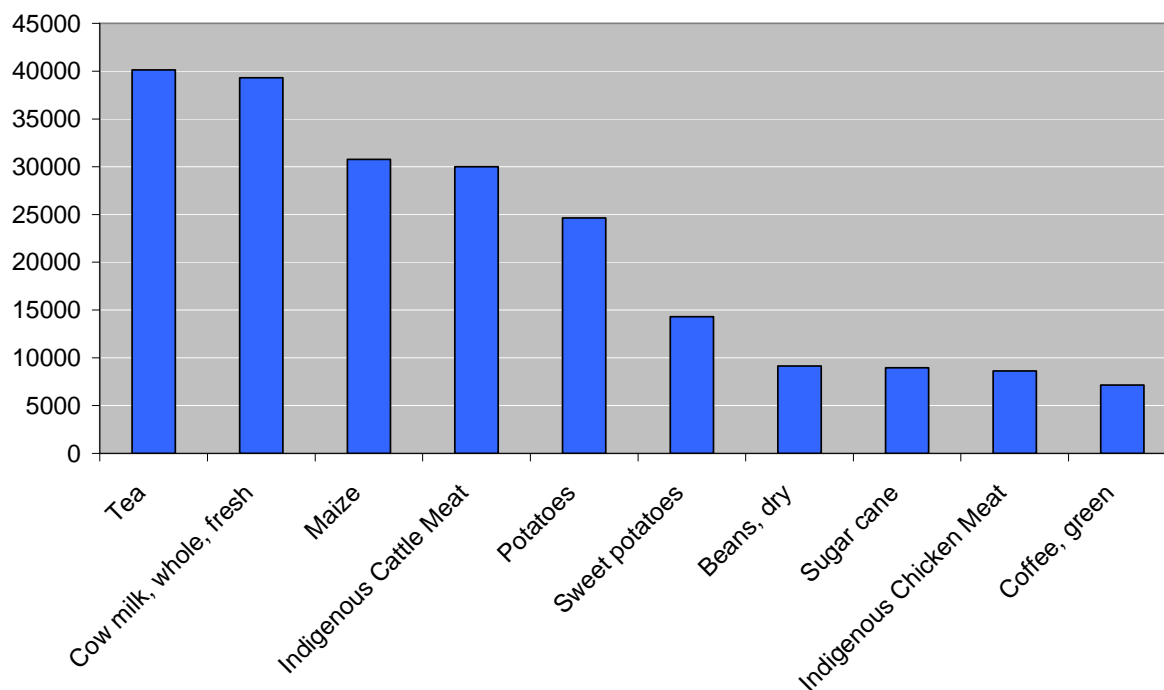
Source: authors based on the 2003 SAM of Kenya

Table 2. Export and Import Value (millions of KES)

Commodity	Export value	% tot	% agri tot	Commodity	Import value	% tot	% food import bill
Maize	295.69	0.11	0.23	Maize	837.55	0.20	3.26
Wheat	74.56	0.03	0.06	Wheat	10067.35	2.41	39.14
Rice		0.00	0.00	Rice	4917.13	1.18	19.12
Barley	91.88	0.03	0.07	Barley		0.00	0.00
Cotton	36.88	0.01	0.03	Cotton		0.00	0.00
Other cereals	38.82	0.01	0.03	Other cereals		0.00	0.00
Sugarcane	1521.80	0.54	1.19	Sugarcane	2223.27	0.53	8.64
Coffee	12846.50	4.57	10.03	Coffee		0.00	0.00
Tea	50071.34	17.81	39.09	Tea	449.26	0.11	1.75
Roots & tubers		0.00	0.00	Roots & tubers		0.00	0.00
Pulses & oil seeds	8523.15	3.03	6.65	Pulses & oil seeds	459.04	0.11	1.78
Fruits	2152.99	0.77	1.68	Fruits		0.00	0.00
Vegetables	8322.54	2.96	6.50	Vegetables	494.07	0.12	1.92
Cut flowers	21666.71	7.71	16.91	Cut flowers		0.00	0.00
Other crops	4506.17	1.60	3.52	Other crops	655.34	0.16	2.55
Mining	6644.57	2.36	5.19	Mining	361.40	0.09	1.41
Meat & dairy	15325.15	5.45	11.96	Meat & dairy	1154.57	0.28	4.49
Grain milling		0.00	0.00	Grain milling	471.64	0.11	1.83
Sugar & bakery	2632.22	0.94	2.05	Sugar & bakery	3990.58	0.96	15.52
Beverages & tobacco	13424.66	4.78	10.48	Beverages & tobacco	1889.27	0.45	7.35
TOT Exports	281115.65			TOT Imports	416892.40		1620.90
TOT of Agricultural prod	128106.41	45.57	100.00	TOT food import bill	25719.80	6.17	100.00

Source: authors based on the 2003 SAM of Kenya

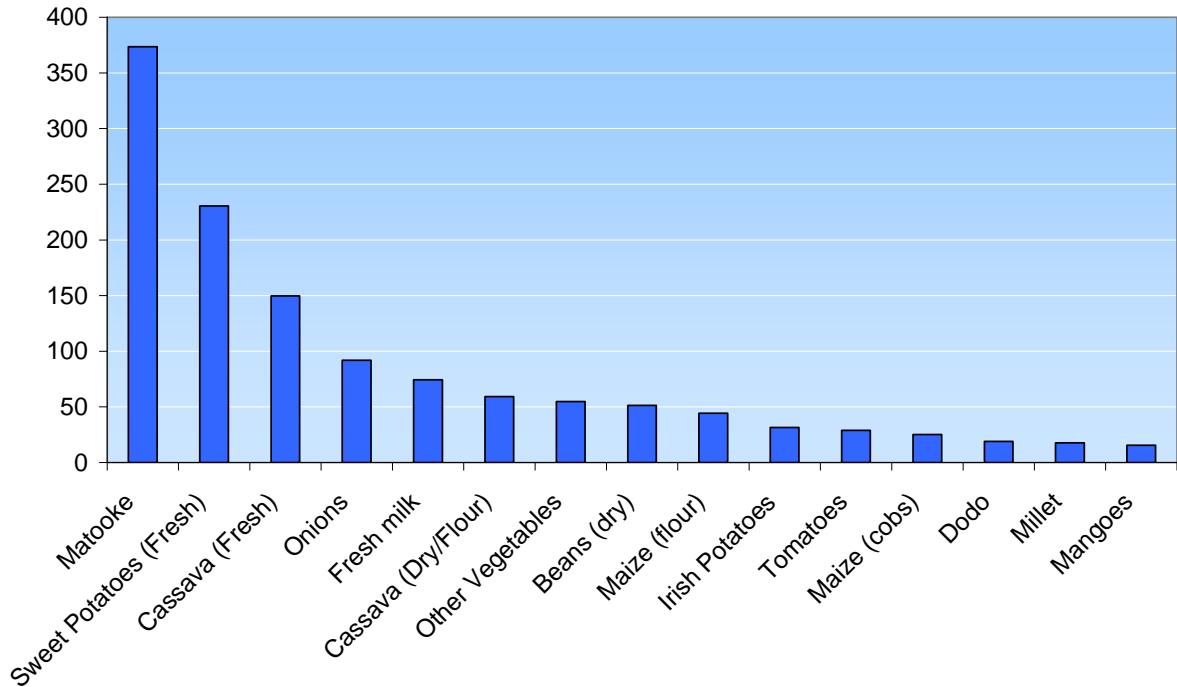
Figure 6. Production value, 2005 (million KES)



Source: authors based on FAOSTAT, 2010

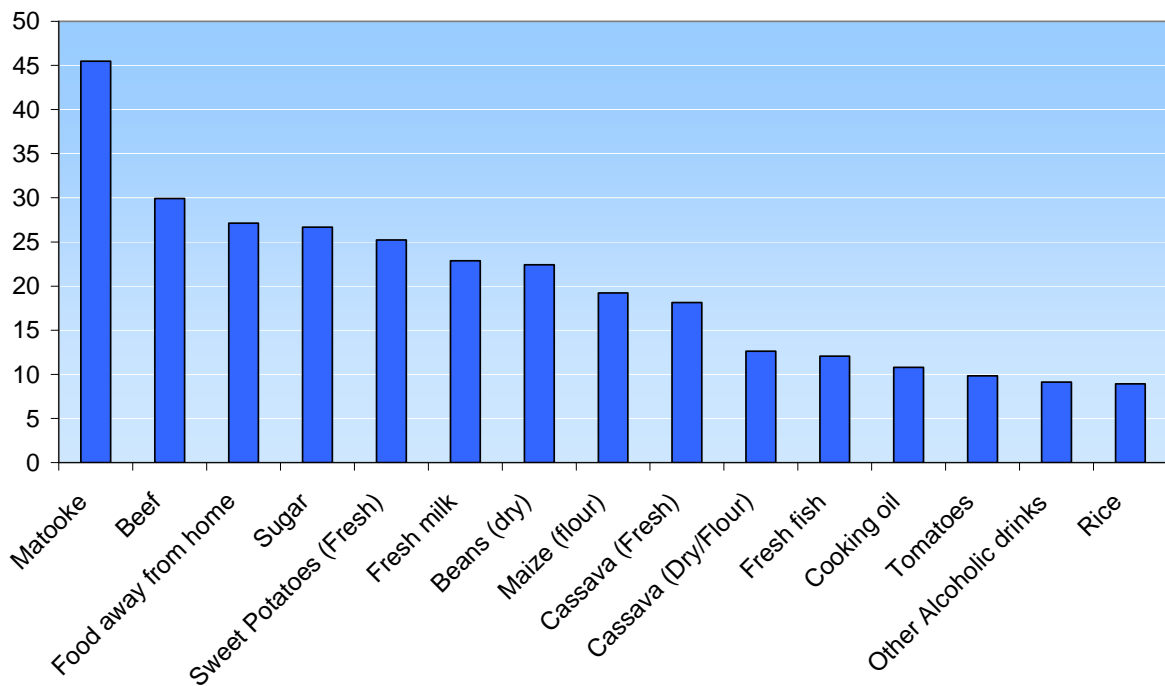
Annex 4: Uganda

Figure 1. Food Quantity Consumed (grams/person/day), 2003



Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Figure 2. Food Consumption Value (UGX/person/day), 2003



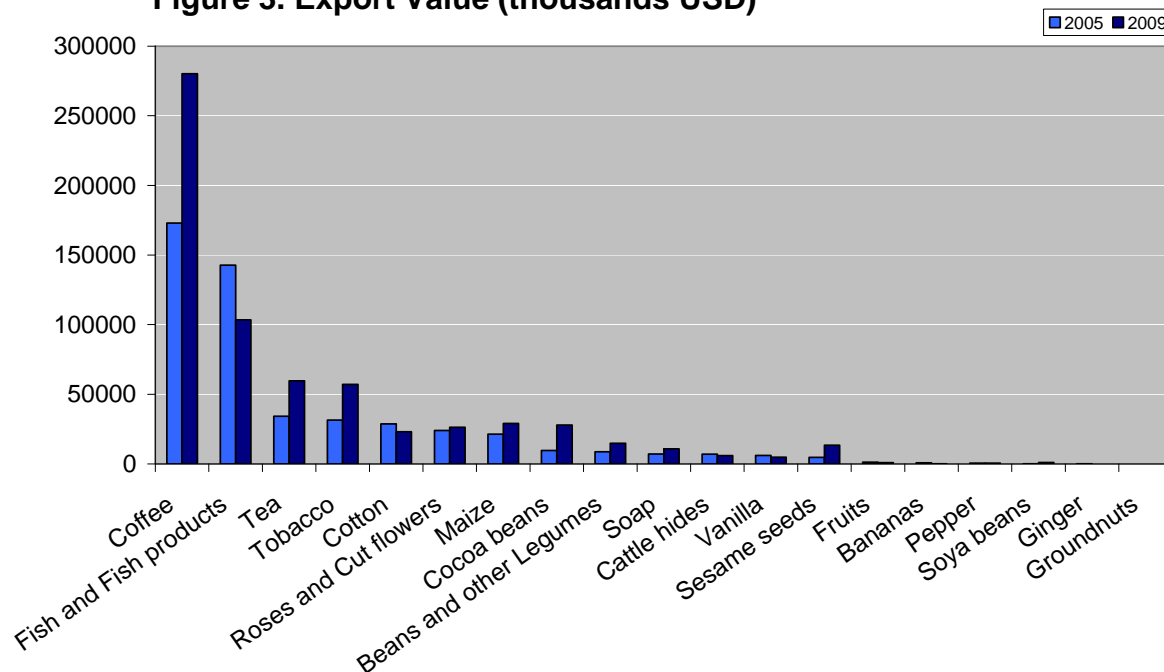
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Table 1. Monetary value, quantity consumed and dietary energy consumption

Monetary value (UGX/person/day)		Quantity consumed (grams/person/day)		Dietary energy consumption (kcal/person/day)				
1	Matooke	45.47	1	Matooke	373.46	1	Matooke	466.00
2	Beef	29.91	2	Sweet Potatoes (Fresh)	230.43	2	Cassava (Fresh)+ (dry)	442.16
3	Food away from home	27.12	3	Cassava (Fresh)	149.72	3	Beans (dry)	174.08
4	Sugar	26.66	4	Onions	91.83	4	Maize (flour)	156.84
5	Sweet Potatoes (Fresh)	25.23	5	Fresh milk	74.36	5	Sweet Potatoes (Fresh)	134.74
	subtotal	154.39		subtotal	919.80		subtotal	1373.83
	%	35.51		%	63.33		%	67.60
6	Fresh milk	22.86	6	Cassava (Flour)	59.17	6	Millet	63.14
7	Beans (dry)	22.41	7	Other Vegetables	54.70	7	Cooking oil	46.01
8	Maize (flour)	19.23	8	Beans (dry)	51.30	8	Sorghum	45.03
9	Cassava (Fresh)	18.15	9	Maize (flour)	44.15	9	Fresh milk	44.77
10	Cassava (Flour)	12.61	10	Irish Potatoes	31.55	10	Rice	41.14
	subtotal	249.65		subtotal	1160.67		subtotal	1613.91
	%	57.42		%	79.92		%	79.41
11	Fresh fish	12.06	11	Tomatoes	28.92	11	Beef	40.28
12	Cooking oil	10.79	12	Maize (cobs)	25.18	12	Sugar	39.12
13	Tomatoes	9.83	13	Dodo	19.06	13	Onions	32.45
14	Other Alcoholic drinks	9.14	14	Millet	17.71	14	Dodo	23.78
15	Rice	8.92	15	Mangoes	15.48	15	Sweet Potatoes (Dry)	22.61
	subtotal	300.39		subtotal	1267.02		subtotal	1772.16
	%	69.09		%	87.24		%	87.20
16	Other	134.39	16	Other	185.32	16	Other	260.19
	total	434.78		total	1452.34		total	2032.34

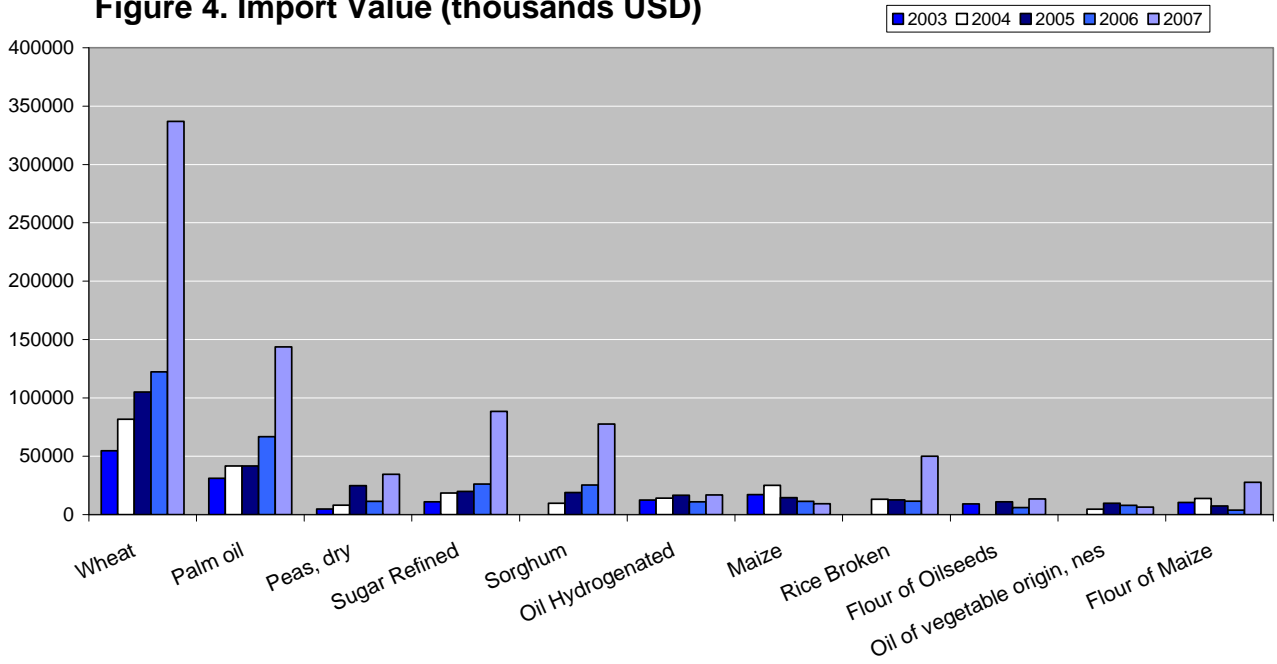
Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2003)

Figure 3. Export Value (thousands USD)



Source: authors based on FAOSTAT, 2010

Figure 4. Import Value (thousands USD)



Source: authors based on FAOSTAT, 2010

Table 2. Production, Import, Export and supply quantities (year 2005)

item	Production (1000 tonnes)	Import Quantity (1000 tonnes)	Export Quantity (1000 tonnes)	Domestic supply quantity (1000 tonnes)
Wheat	15	370	7	378
Rice (Milled Equivalent)	102	66	13	155
Barley		18	0	17
Maize	1170	79	90	1198
Millet	672	0	0	672
Sorghum	449	73	0	521
Cassava	5576	0	0	5576
Potatoes	585	0	0	585
Vegetable Oils +	128	152	11	262
Palm Oil	0	114	3	111
Sweet Potatoes	2604	0	0	2604
Sugar Cane	2350		0	2350
Sugar (Raw Equivalent)	211	58	17	251
Honey	0	0	0	0
Beans	478	8	23	463
Peas	15	44	5	55
Pulses, Other	159	1	0	160
Soyabeans	158	1	1	158
Groundnuts (Shelled Eq)	111	0	0	112
Sunflowerseed	173	0	0	173
Rape and Mustardseed		0	0	0
Cottonseed	34	0	3	31
Coconuts - Incl Copra		0	0	0
Sesameseed	161	0	7	154
Tomatoes	14	0	0	14
Onions	147	0	0	147
Bananas	615		2	613
Plantains	9045			9045
Pineapples	2	0	1	1
Meat +	295	0	0	295
Bovine Meat	106	0	0	106
Mutton & Goat Meat	35	0	0	35
Pigmeat	98	0	0	99
Poultry Meat	38	0	0	38
Meat, Other	18	0	0	18

Source: authors based on FAOSTAT food balance sheet, 2010.

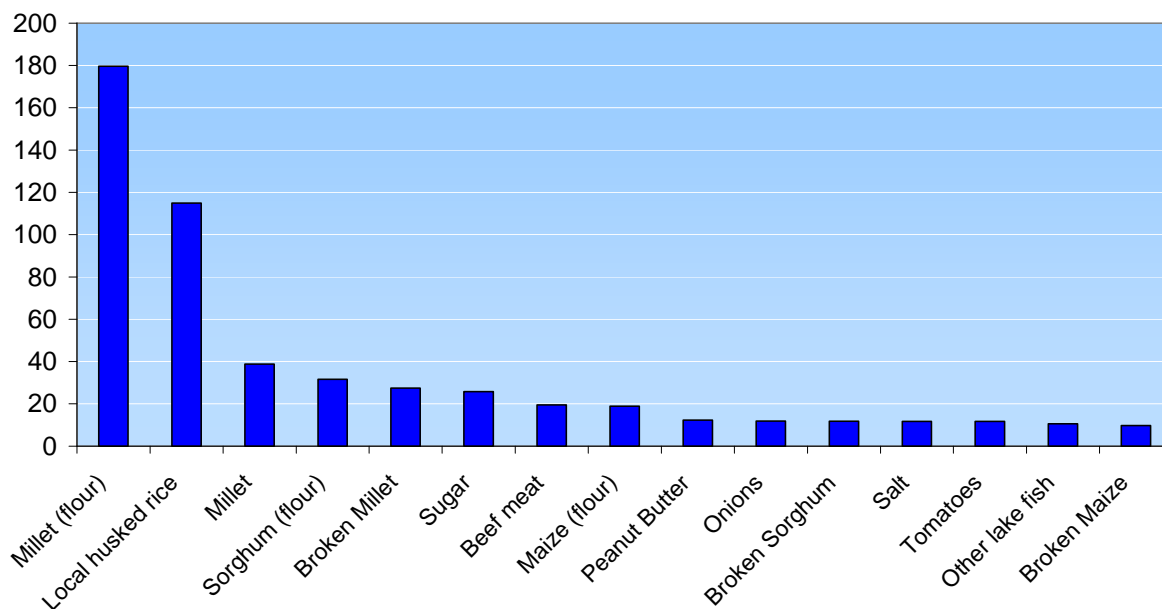
Table 3. Production Value (year 2005)

Rank	Commodity	Production (Int \$1000)	Production (MT)	share (Int \$1000)
1	Plantains	1504704	9045000	38.56
2	Cassava	401806	5576000	10.30
3	Sweet potatoes	261676	2604000	6.71
4	Indigenous Cattle Meat	219318	106038	5.62
5	Cow milk, whole, fresh	195465	735000	5.01
6	Beans, dry	189751	478000	4.86
7	Sesame seed	139979	161000	3.59
8	Coffee, green	129256	158100	3.31
9	Maize	118478	1170000	3.04
10	Millet	101295	672000	2.60
11	Indigenous Pigeon	99644	98400	2.55
12	Bananas	87643	615000	2.25
13	Potatoes	74410	585000	1.91
14	Vegetables fresh nes	74121	395000	1.90
15	Groundnuts, with shell	70166	159000	1.80
16	Tobacco, unmanufactured	57272	31413	1.47
17	Sorghum	47282	449000	1.21
18	Sugar cane	44648	2350000	1.14
19	Indigenous Goat Meat	43843	28795	1.12
20	Indigenous Chicken Meat	41352	35452	1.06
	TOTAL	3902109	25452198	100.00

Source: authors based on FAOSTAT, 2010

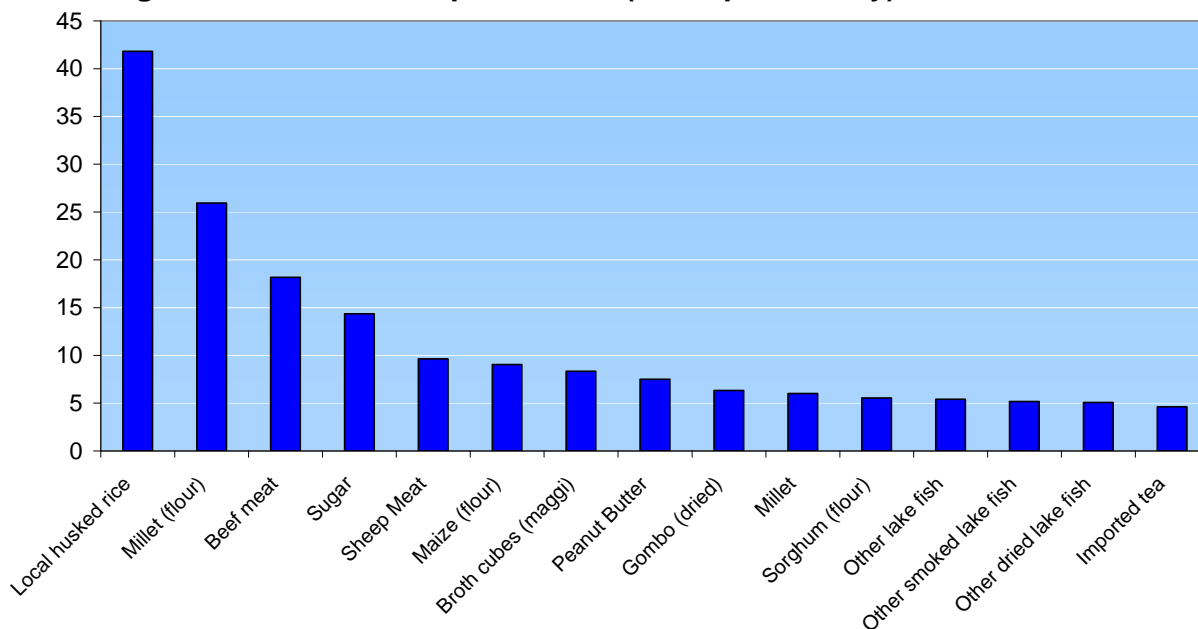
Annex 5: Mali

Figure 1. Food Quantity Consumed (grams/person/day), 2001



Source: based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2001)

Figure 2. Food Consumption Value (FCFA/person/day), 2001

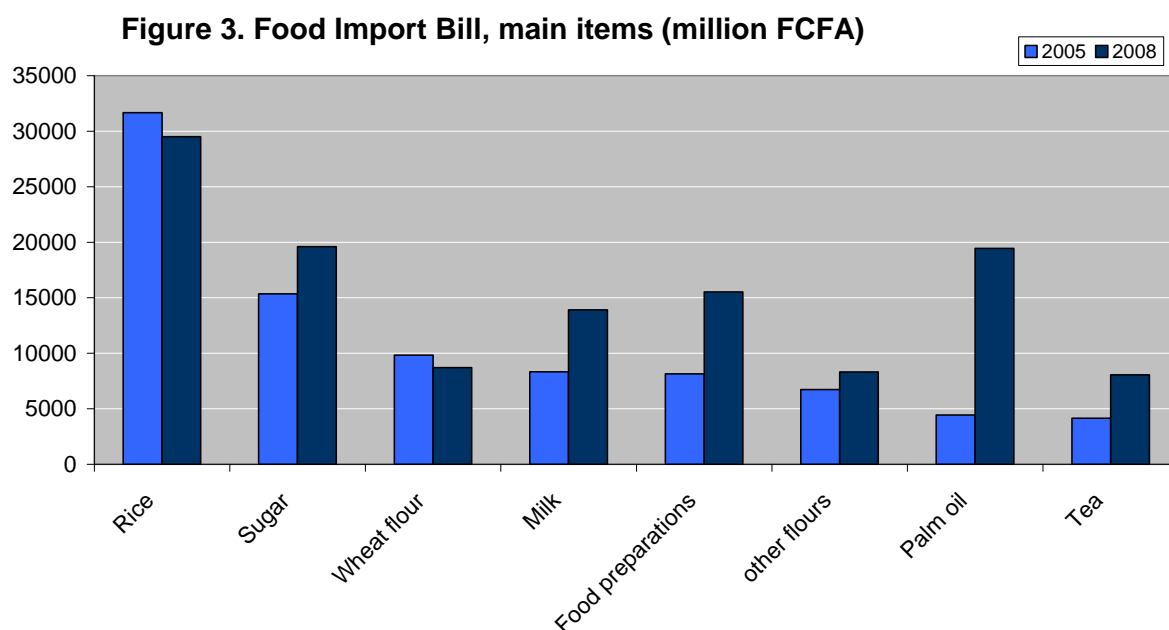


Source: authors based on FAO- ESS Food Security Statistics, 2009. (Data refer to 2001)

Table 1. Monetary value, quantity consumed and dietary energy consumption

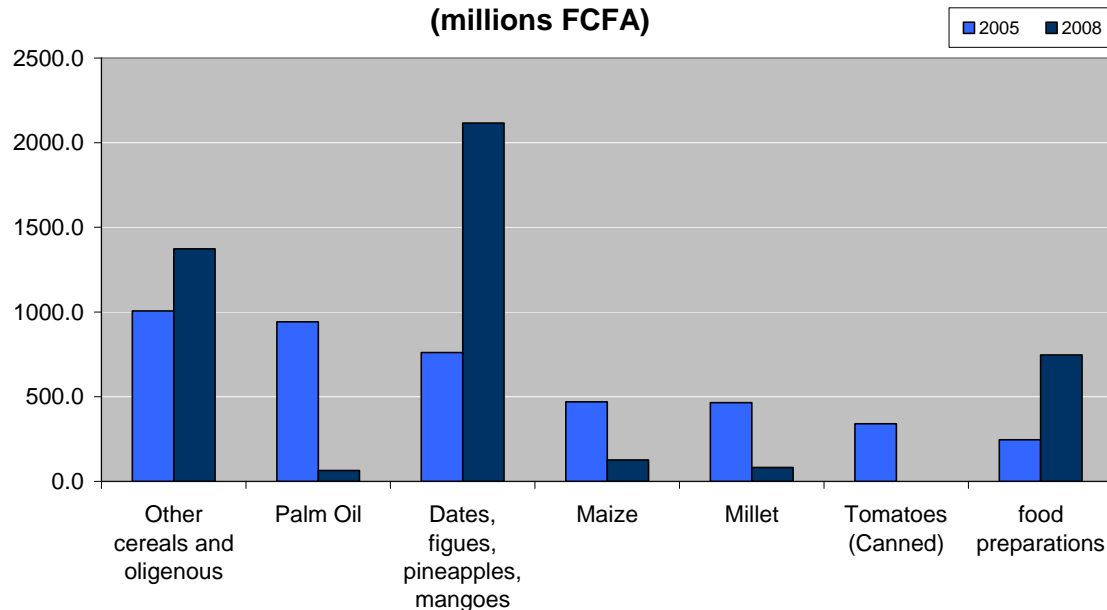
Monetary value (FCFA/person/day)		Quantity consumed (grams/person/day)		Dietary energy consumption (kcal/person/day)				
1	Local husked rice	41.83	1	Millet (flour)	179.60	1	Millet (flour)	686.26
2	Millet (flour)	25.96	2	Local husked rice	114.97	2	Local husked rice	413.19
3	Beef meat	18.17	3	Millet	38.80	3	Millet	135.92
4	Sugar	14.35	4	Sorghum (flour)	31.61	4	Sorghum (flour)	114.10
5	Sheep Meat	9.64	5	Broken Millet	27.44	5	Sugar	101.33
subtot		109.94	subtot		392.42	subtot		1450.80
%		42.73	%		56.66	%		65.74
6	Maize (flour)	9.04	6	Sugar	25.77	6	Broken Millet	97.89
7	Broth cubes (maggi)	8.32	7	Beef meat	19.52	7	Peanut Butter	78.40
8	Peanut Butter	7.50	8	Maize (flour)	18.92	8	Maize (flour)	58.20
9	Gombo (dried)	6.33	9	Peanut Butter	12.30	9	Shea butter	48.28
10	Millet	5.99	10	Onions	11.84	10	Peanut oil	42.01
subtot (cumulative)		147.13	subtot (cumulative)		480.78	subtot (cumulative)		1775.56
%		57.18	%		69.42	%		80.45
11	Sorghum (flour)	5.53	11	Broken Sorghum	11.74	11	Broken Sorghum	41.89
12	Other lake fish	5.40	12	Salt	11.73	12	Beef meat	38.06
13	Other smoked lake fish	5.16	13	Tomatoes	11.70	13	Broken Maize	35.24
14	Other dried lake fish	5.06	14	Other lake fish	10.58	14	Sorghum	28.03
15	Imported tea	4.61	15	Broken Maize	9.74	15	Local niébé (beans)	27.19
subtot (cumulative)		172.89	subtot (cumulative)		536.27	subtot (cumulative)		1945.97
%		67.19	%		77.43	%		88.17
16	Other	84.41	16	Other	156.32	16	Other	260.99
total		257.29	total		692.58	total		2206.97

Source: authors on the basis of FAO- ESS Food Security Statistics, 2009. (Data refer to 2001)
Source: Authors on the basis of CountryStat data, 2010



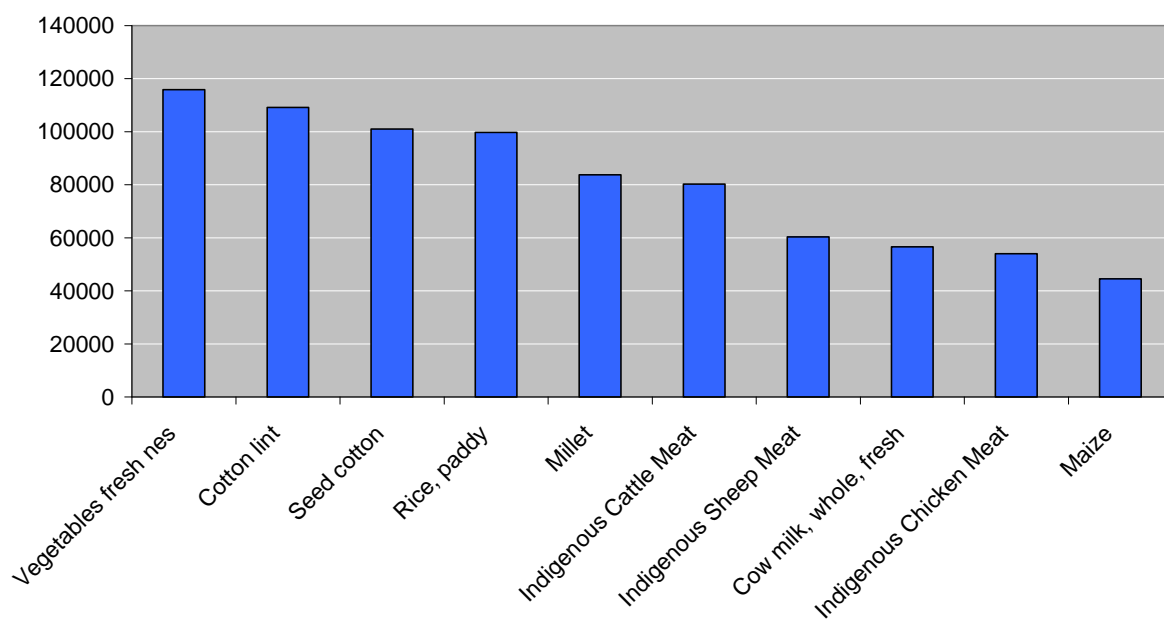
Source: Authors based on CountryStat data, 2010

Figure 4. Export Value of main agricultural commodities (millions FCFA)



Source: Authors based on CountryStat data, 2010

Figure 5. Production Value, 2005 (millions FCFA)



Source: Authors on the basis of FAOSTAT data, 2010

Table 2. Production Value (year 2005)

item	Production value (2005)	Share of the total value (2005)
Vegetables fresh nes	115883	10.26
Cotton lint	109189	9.67
Seed cotton	101016	8.94
Rice, paddy	99798	8.83
Millet	83749	7.41
Indigenous Cattle Meat	80234	7.10
Indigenous Sheep Meat	60325	5.34
Cow milk, whole, fresh	56595	5.01
Indigenous Chicken Meat	54000	4.78
Maize	44555	3.94
Sorghum	41209	3.65
Goat milk, whole, fresh	40942	3.62
Groundnuts, with shell	32910	2.91
Indigenous Goat Meat	31613	2.80
Tomatoes	28750	2.54
Cottonseed	28511	2.52
Sheep milk, whole, fresh	21810	1.93
Onions, dry	16868	1.49
Cow peas, dry	12894	1.14
Game meat	11245	1.00
Hen eggs, in shell	9834	0.87
Chillies and peppers, dry	9000	0.80
Mangoes, mangosteens, guavas	6832	0.60
Sugar cane	5887	0.52
Karite Nuts (Sheanuts)	5618	0.50
Sweet potatoes	4119	0.36
Fonio	2621	0.23
Indigenous Camel Meat	2239	0.20
Yams	1824	0.16
Sesame seed	1580	0.14
Beans, green	1365	0.12
Cassava	1207	0.11
Indigenous Ass Meat	1144	0.10
Indigenous Pigmeat	1036	0.09
Melonseed	831	0.07
Wheat	494	0.04
Natural honey	471	0.04
Bambara beans	365	0.03
Indigenous Horse Meat	326	0.03
Wool, greasy	252	0.02
Other Bastfibres	177	0.02
Tobacco, unmanufactured	175	0.02
Fruit Fresh Nes	136	0.01
Tea	57	0.01
Pulses, nes	25	0.00
Cereals, nes	8	0.00

Source: Authors on FAOSTAT, 2010