



HighQuest

P A R T N E R S

Market Potential of Sub-Saharan Africa

Prepared for the United States Soybean Export Council

December 19, 2011

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Executive Summary – Production and Consumption

Current production of soybeans, soybean meal, and soybean oil is projected to grow through 2025. Soybean production will continue to meet consumption, but soybean meal and soybean oil consumption will outpace production. This production shortfall must be met by imports, and represents a significant opportunity for US soybean complex exporters.

	2011			2025				
	Production (MT)	Consumption (MT)	Net Imports (MT)	Production (MT)	Consumption (MT)	Net Imports (MT)	Production CAGR	Consumption CAGR
Soybeans	1,400,000	1,200,000	- 200,000	2,500,000	1,900,000	- 600,000	4.1%	3.2%
Soybean Meal	400,000	1,500,000	1,100,000	700,000	3,000,000	1,300,000	4.0%	5.2%
Soybean Oil	<100,000	500,000	400,000	150,000	700,000	550,000	3.8%	1.8%

Executive Summary – Regional Investment

- African agriculture is dominated by smallholders who are farming at subsistence levels. Commercial farming has not taken hold in the region outside of South Africa.
- However, the private equity sector is starting to invest in commercial farming in Sub-Saharan Africa, particularly in row crops in Southern Africa and palm plantations in West Africa.
 - Currently \$1.765 billion has been allocated to develop commercial farming in Sub-Saharan Africa as many of the private equity firms view the low cost of farmland and the potential returns that can be generated from this land to be more enticing than the potential investment risk.
- There is a severe shortage of credit throughout the region. Bank credit allocated to South Africa, \$5.2 billion, is equivalent to the rest of the 47 Sub-Saharan Africa nations combined.
 - Nigeria (palm and soy) Tanzania (row crops), Kenya (row crops), Ghana (palm plantations) and Mozambique (row crops) are the countries which receive the most bank credit allocated to agriculture.
 - The lack of bank credit makes it very difficult for importers to access goods and could give the US an import advantage over its primary competitors due to GSM-102, the USDA's Export Credit Guarantee Program.
- There has been limited investment in storage, processing and transportation infrastructure and these sums need to increase for Sub-Saharan Africa to meet its current deficit in soybean meal and oil production.

Executive Summary – US Competitiveness

- Argentina is the dominant exporter of soybeans and soy products to Sub-Saharan Africa due to its price competitiveness.
 - In 2010, Sub-Saharan African soybean complex imports were dominated by soybean meal and soybean oil.
 - In addition to Argentina, competitors include Brazil and India.
 - These countries produce GMO-free commodities, which are widely demanded in the region.
- Historically, the major challenges for US importers into the region have been price and logistics.
 - Freight rates from the US to many countries in the region are higher than from Argentina due to location.
 - The quantities that Sub-Saharan African buyers require (outside of South Africa) are too small for full Handymax and Panamax ships and it is very expensive to ship in coasters from the US to these countries.
 - Argentine suppliers have developed trade relationships with many of the largest soy complex importers in the region and the region has developed a preference for Argentine soybean meal.
 - Countries in East Africa generally require non-GMO soybean meal and tend to import from India due to price.
- The majority of soybean production in Sub-Saharan Africa occurs in Southern Africa. A preference for local production, coupled with a landed price disadvantage for US exports, hurts competitiveness in this region.

Executive Summary – US Exporters’ Advantages and Disadvantages

Advantages

- Regional importers have extremely limited access to credit: the USDA-administered GSM-102 program connects importers with credit in order to promote and facilitate the US agricultural exports. This program can be used to increase imports in countries that are GSM-102 certified.
- The US is price competitive on container shipments relative to Argentina and Brazil for shipments to West and Eastern African ports.
- Soy’s use in human nutrition is being advocated by governments and organizations throughout the region, adding a source of soybean complex demand.

Disadvantages

- In the Sub-Saharan African countries eligible for GSM-102, interviews indicate that the use of GSM-102 has been limited, yet has the potential to make US exports more competitive.
 - Reasons for underutilization include unawareness of the program, limited approved participating foreign financial institutions, associated risk-based fees and lengthy application processing times.
- GMO soybean complex exports are restricted across Sub-Saharan Africa. South Africa is the notable exception.
- Argentina is the established and lowest landed price supplier to South Africa, the largest soybean meal importer.
- In some regions, infrastructure and logistics inefficiencies at the ports lead to delays in the delivery process and higher import costs. Customs barriers also lead to higher costs, making intraregional trade more competitive than imports into land-locked countries.

Executive Summary – How Can USSEC Assist in Increasing US Soy Complex Exports?

- USSEC can play a pivotal role in increasing US soy complex exports into Sub-Saharan Africa by educating regional customers and banks about the benefits of the GSM-102 program and promoting it, linking customers with container shipping companies and explaining the benefits of containerized imports, and assisting government agencies and NGOs in the promotion of soybeans in human nutrition.
 - The GSM-102 Program is underutilized and is not available in all Sub-Saharan African countries. Promotion and expansion of this program could give US exports an important competitive advantage due to a limited access to credit throughout the region.
 - Sub-Saharan Africa's port infrastructure allows container shipments to be a viable way to reach many countries. The US can capitalize on its container shipment landed price advantage to ports in Sub-Saharan Africa, especially in West Africa, relative to Argentina and Brazil.
 - Regional transportation infrastructure and loading and unloading capacity is very poor throughout the region.
 - The vast majority of ports in the region have the port capacity to unload container ships, but not bulk.
 - The US has a considerable advantage over Argentina and Brazil on container imports into the region due to the high availability of containers in the US compared to its competitors.
 - Outside of South Africa, regional ports are very congested and have limited capacity to handle bulk Panamax and Handymax vessels .
 - Sub-Saharan Africa has a malnutrition problem, and soybeans can act as an inexpensive protein supplement in diets throughout the region. Promotion of soybean consumption for human nutrition by organizations such as USSEC could assist in expanding the market for US soybean exports in the region.

Executive Summary – Selection Matrix

- The results of a HighQuest Partners selection matrix affirm that countries with the highest *potential* to receive US soybean complex exports are found in West, East, and Southern Africa. (See map.)
- From that larger list, our analysis reveals a logical regional ranking of Sub-Saharan African destination countries in terms of the *competitiveness* of US exports of soybeans, soybean meal, and soybean oil to each market, and the priority that should be given to each market. Those eleven countries are listed in the following table, ranked from most attractive to less attractive.



Executive Summary – Ranking of Countries

Country	Advantages	Disadvantages	Opportunities	Threats
Senegal	US already exports soybean oil to Senegal	Domestically-produced peanut oil is a substitute	US has a landed price advantage for soybean oil	Argentina and Brazil may increase exports
Nigeria	Demand for soybean meal is significant	Argentina is the primary provider of imported soybean meal	Soy is being promoted for human nutrition	Expanded domestic production may be met by expanded processing capacity
Ghana	Production of soybeans is limited	Smallholder production means an underdeveloped market for soy	Rising fishmeal costs have made soybean meal attractive	Argentina and Brazil may increase exports
Kenya	Eligible for GSM-102 program	Consumer skepticism for soy as a food product	Potentially less-restrictive stance towards GMOs	India is the low-cost provider of non-GMO soybean meal
Tanzania	Soybean oil consumption growing	Consumer skepticism for soy as a food product	Soy is being promoted for human nutrition	India is the low-cost provider of non-GMO soybean meal
Ethiopia	Edible oil importer	Distance from US markets	Emergency food and protein needs	Anticipated foreign investment in domestic soybean production and processing sectors

Executive Summary – Ranking of Countries (Cont'd)

Country	Advantages	Disadvantages	Opportunities	Threats
South Africa	Established demand for soybean complex imports	Argentina dominates this trade relationship	There is a large container market	Continued growth in soybean production
Zimbabwe	Processing capacity is underutilized because of supply constraints	Imports are primarily Indian	Domestic production will take time to recover from economic crisis	Though underutilized, domestic production capacity exists
Mozambique	Soybean meal supply shortfall	Preference for domestic production	Growing poultry market will need continued supply of soybean meal	Increased domestic production is anticipated
Angola	Importer of soybean oil	For political reasons, Brazil is the dominant importer of soybean oil	Processing capacity is not projected to increase	Poultry imports will continue from Brazil, Argentina, and Uruguay
Zambia		Established production and processing capacity. Domestic prices lower than imports		Dramatic production increases. Increasing investment from private equity

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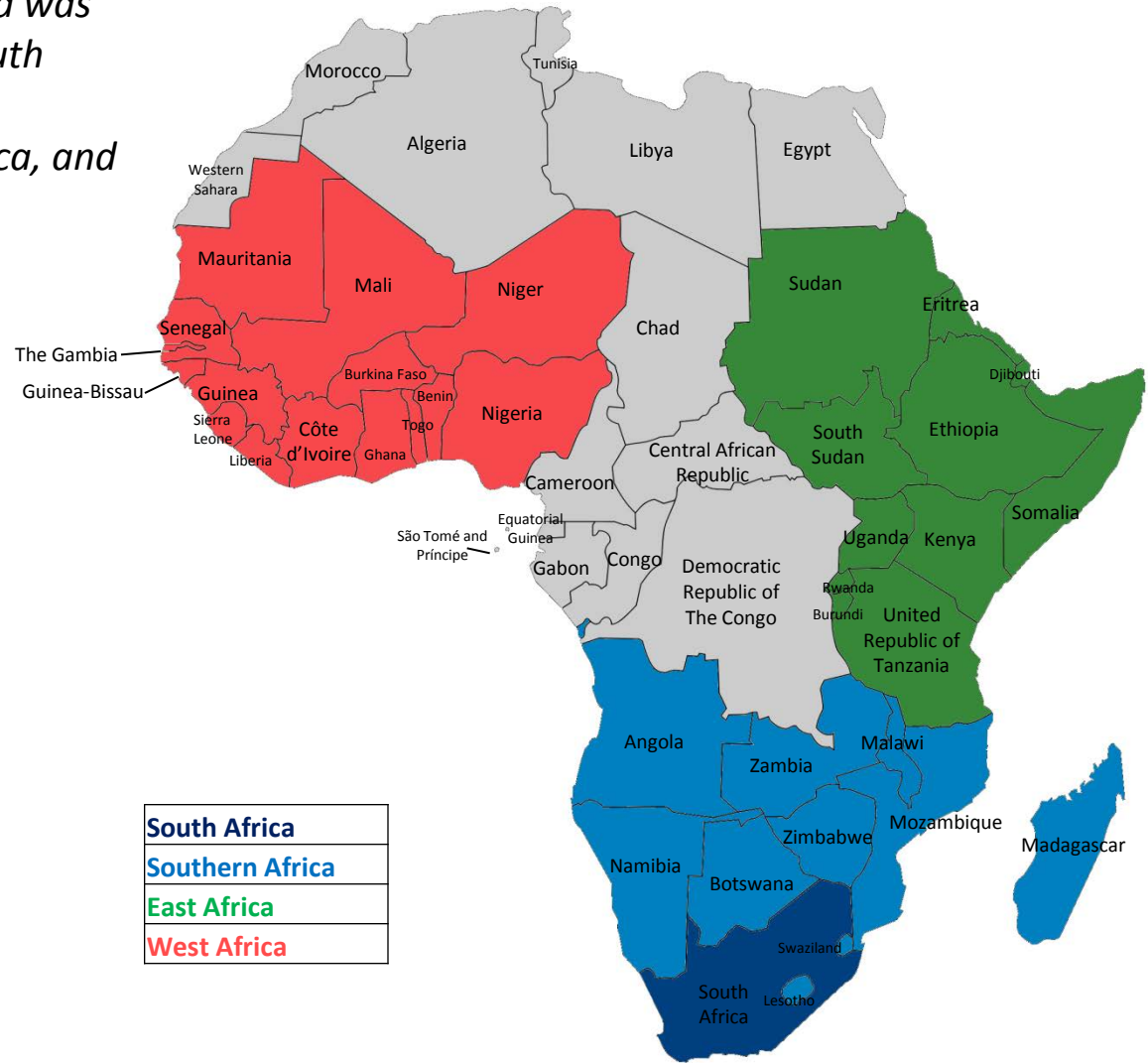
- Executive Summary
- **Regional Overview**
- Investment in Agriculture
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- Conclusions – SWOT Analyses

Regional Overview: Summary

- Sub-Saharan Africa currently produces 1.4 million MT of soybeans per year and production is expected to increase at a CAGR of 4.1% per year to reach 2.5 million MT by 2025.
 - Fertile land in Southern and Western Africa combined with continued investment by private equity, international development organizations and banks into corporate farms is expected to continue to drive production increases.
 - Currently, corn accounts for 43% of available agricultural land, followed by sorghum (35%) and groundnuts (11%).
 - In 2011, soybeans were planted on 1.1 million hectares of land in Sub-Saharan Africa, or 1% of total arable land. The primary soybean growing countries are South Africa, Nigeria, Zambia, Uganda and Zimbabwe.
- Soybean imports into the region are limited as Sub-Saharan Africa grows more soybeans than it can process but, in some countries, soybeans have been introduced as a high nutrition plant source in human food consumption. We believe that this trend will continue as GDP per capita increases and organizations, such as TechnoServe, continue to promote the value of soybeans for nutritional purposes across the region.
- Soybean meal and oil production is limited due to a lack of processing capacity throughout the region. Currently, there is a net shortfall of 1 million MT of soybean meal and 450,000 MT of soybean oil across the region, and it is estimated that as per capita GDP increases and demand for animal protein and cooking oil increases, the shortfall will grow substantially.
 - Despite investment in processing capacity in the major production countries and at ports, demand for these products in the region is expected to continue to grow at a higher rate than processing capacity can be built.
 - Argentine imports dominate the region, with 96% of soybean meal imports and 35% of soybean oil imports in 2010.

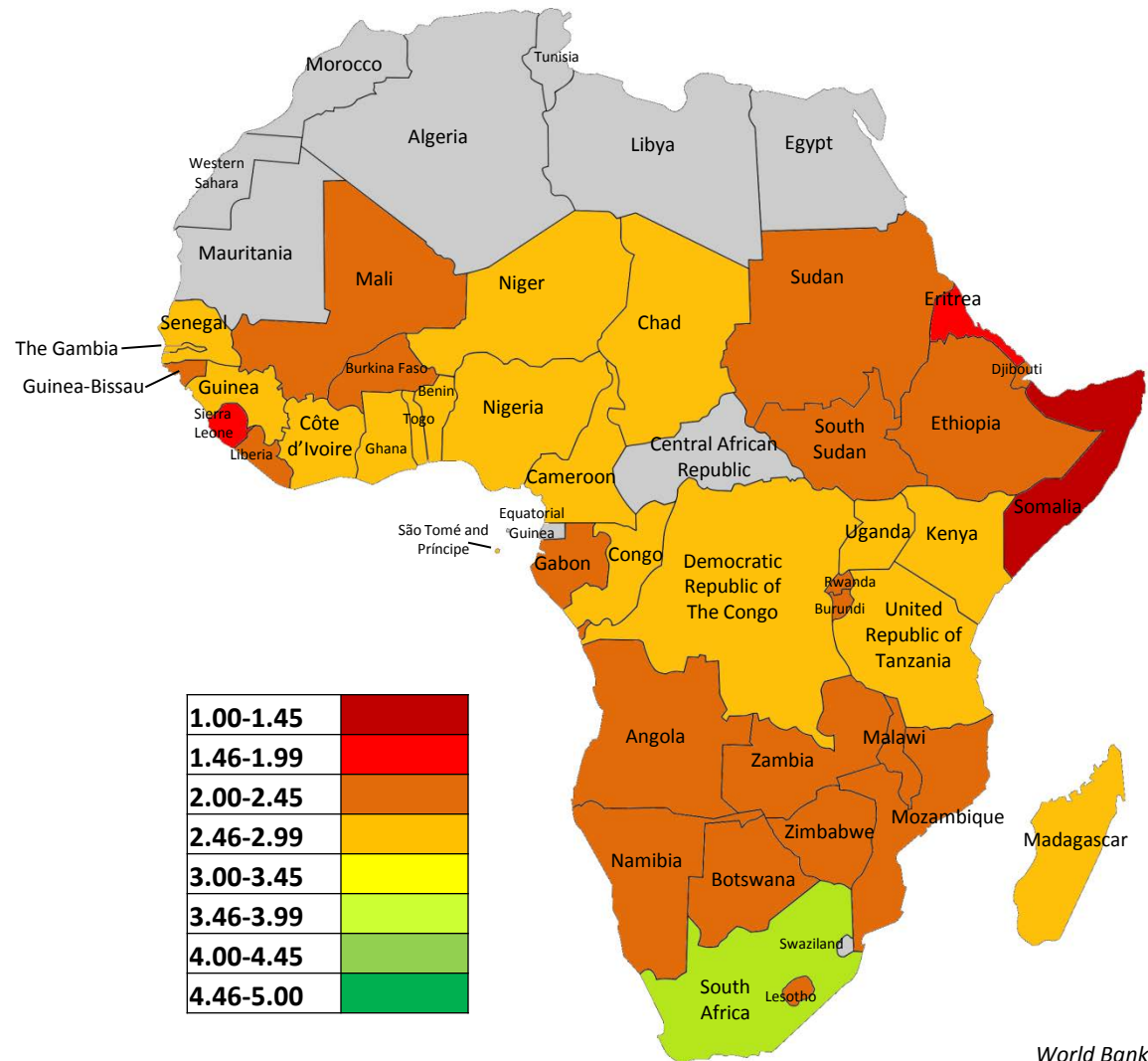
Regional Overview: Mapping Sub-Saharan Africa

For the purposes of this report, Africa was divided and examined in regions: South Africa as a stand alone region, other Southern African countries, East Africa, and West Africa.



Regional Logistics Quality

- The World Bank's Logistics Performance Index (LPI) shows that South Africa leads Sub-Saharan Africa in terms of logistics services and ease of trade, variables particularly relevant to market access.
- The worldwide range of scores falls between 1.00 and 5.00. Sub-Saharan African country scores begin at a minimum of 1.34 (Somalia) and reach a peak of 3.46 (South Africa).
- As a point of reference, the United States' LPI is 3.86, Japan's is 3.97, and Germany's is 4.11.

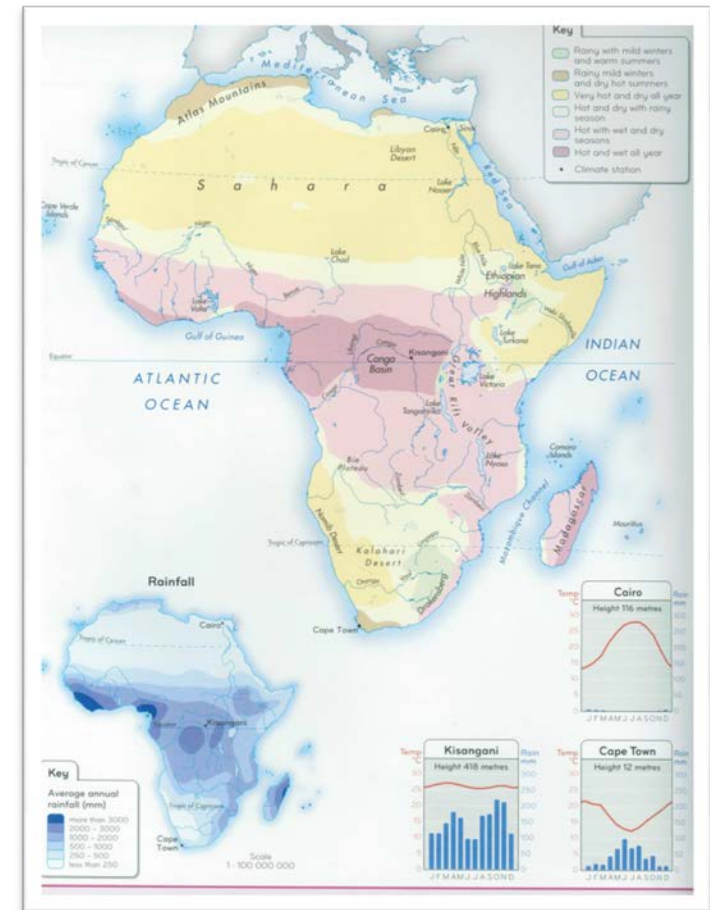


World Bank

Regional Agro-Ecological Zones

The rainfall and climate maps presented highlight the agricultural potential of various parts of Africa.

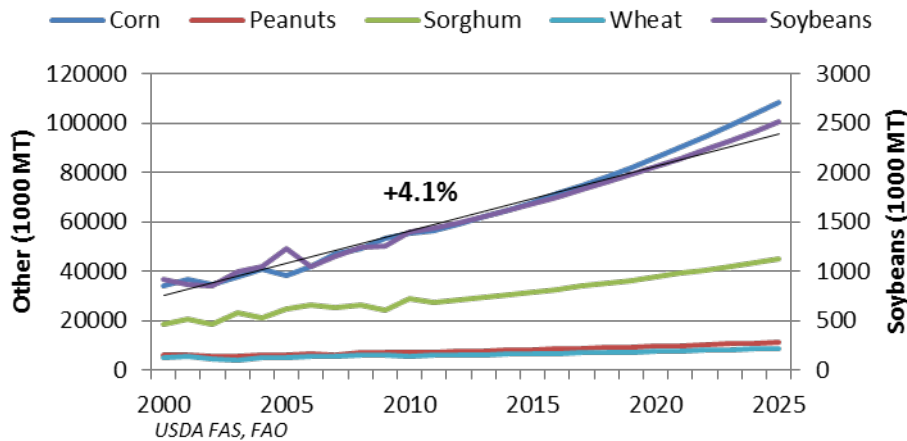
- The light pink shaded areas form the Guinea Savannah zone of Africa.
 - This zone represents the best growing conditions for commercial row crop farming. The local prospects for soy, sugar, maize, rice, cotton and cassava compare well with commercial production in the Brazilian Cerrado region, which has similar agro-ecological zones.
 - Productive crop production is also possible in almost all river basins due to irrigation.
 - In addition, most countries have specific geographical areas with microclimates that provide good, unique conditions for profitable farming.
- The purple area, mainly the Congo River basin and some coastal areas of West Africa, consist of dense tropical forests, but also has a climate suitable (rainfall of > 3,000 mm) for crops such as palm oil, rubber and bananas.
- The rainfall map confirms that Sub-Saharan Africa has zones conducive to farming:
 - Light blue areas are not at all conducive to economic farming opportunities other than ranching, irrigated, or otherwise controlled means of agriculture.
 - Medium blue-colored areas represent the most prosperous row crop farming opportunities.
 - Dark blue-shaded areas are rain belts focused on the production of tropical crops.



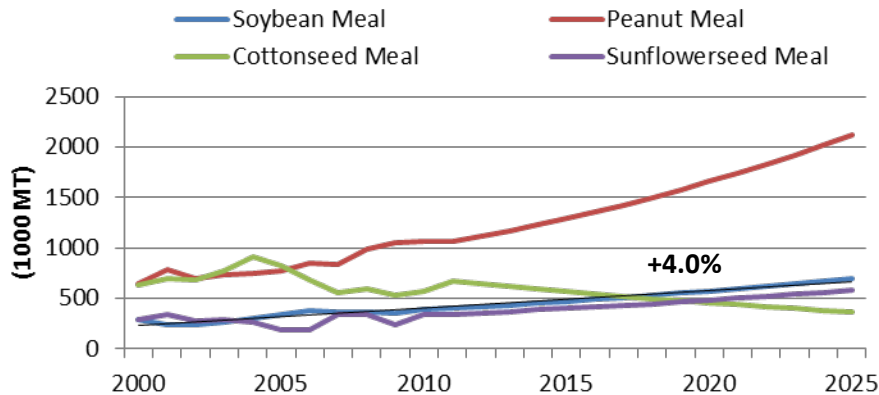
Atlas for Ghana, Collins, 2009

Regional Overview: Production

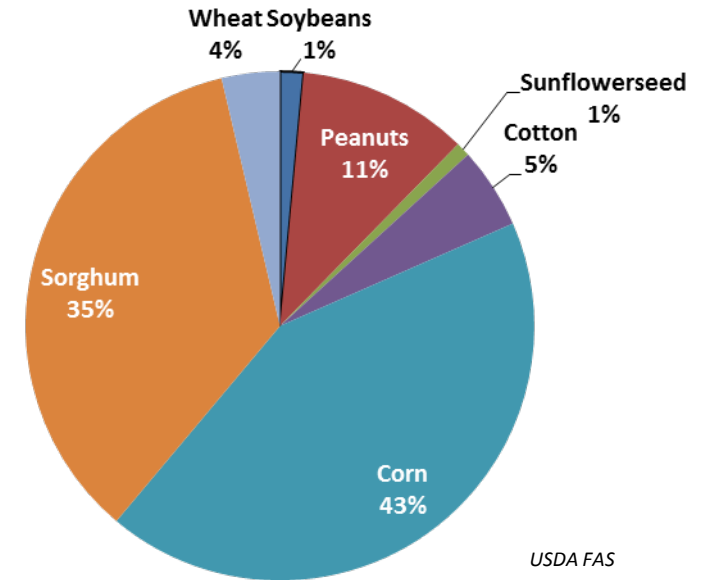
Sub-Saharan African Crop Production



Sub-Saharan African Meal Production



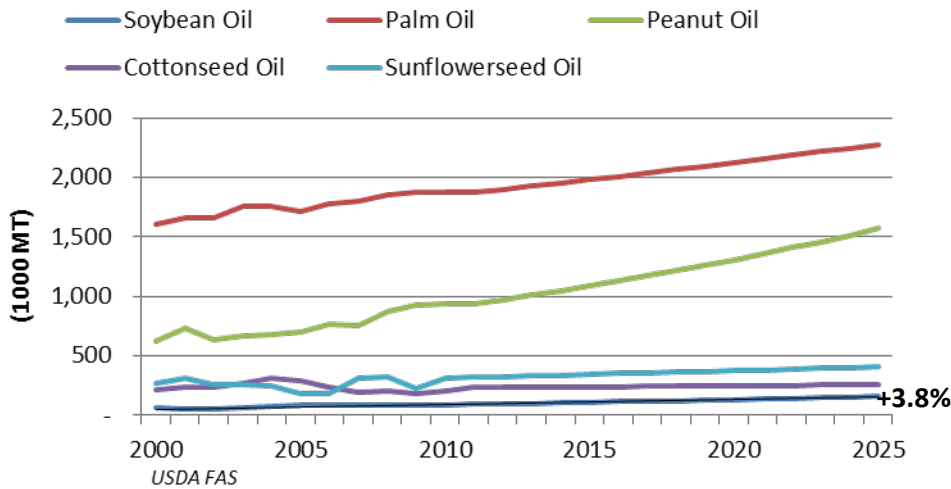
2011 – Sub-Saharan African Agricultural Land



- In 2011, soybeans accounted for 1.1 million hectares, or 1% of agricultural land devoted to major crops in Sub-Saharan Africa.
- An historical CAGR suggests soybean production will grow at a rate of 4.1% annually through 2025 to 2.5 million MT.
- Soybean meal production is projected to grow at the same annual rate through 2025 to 700,000 MT, particularly in South Africa.
- Peanut meal is projected to continue to dominate regional meal production.

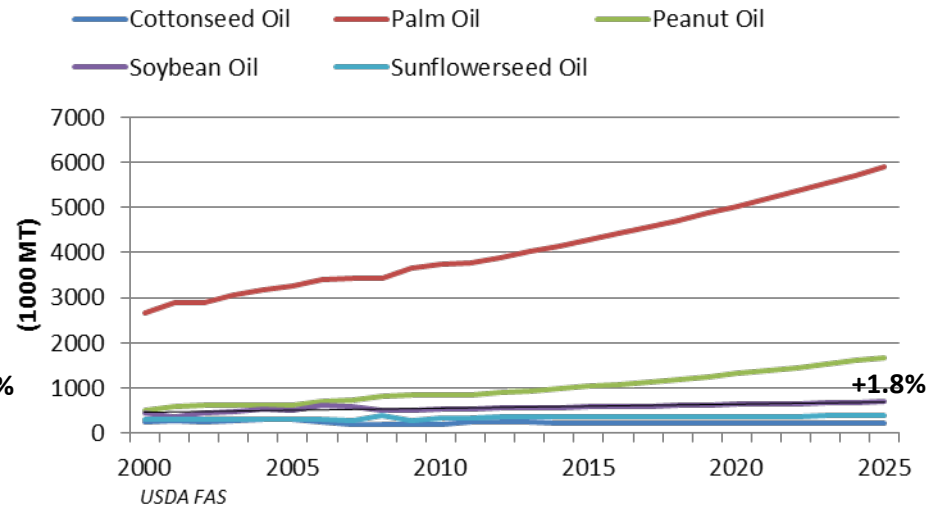
Regional Overview: Vegetable Oil Production and Consumption

Sub-Saharan African Vegetable Oil Production



- Although palm oil is the most widely-produced vegetable oil, regional soybean oil production has been growing at an annual rate of 3.8% since 2000.
- 2011 USDA data shows regional soybean oil production in Sub-Saharan Africa is approximately 100,000 MT annually.

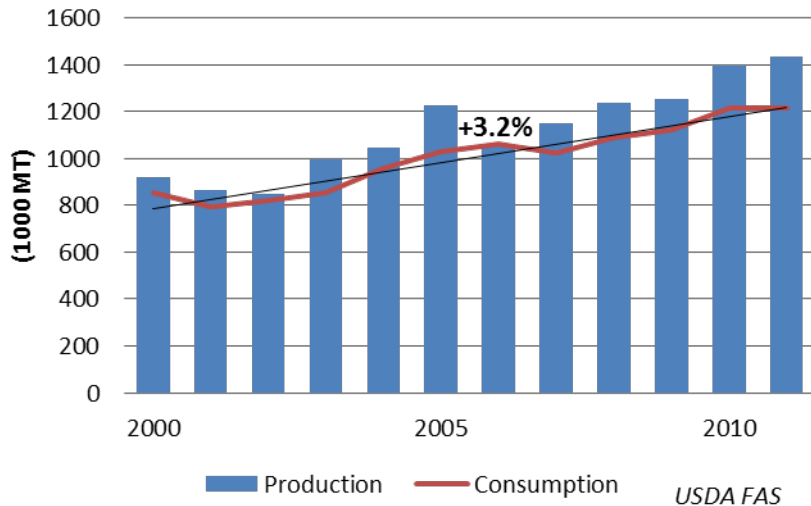
Sub-Saharan African Vegetable Oil Consumption



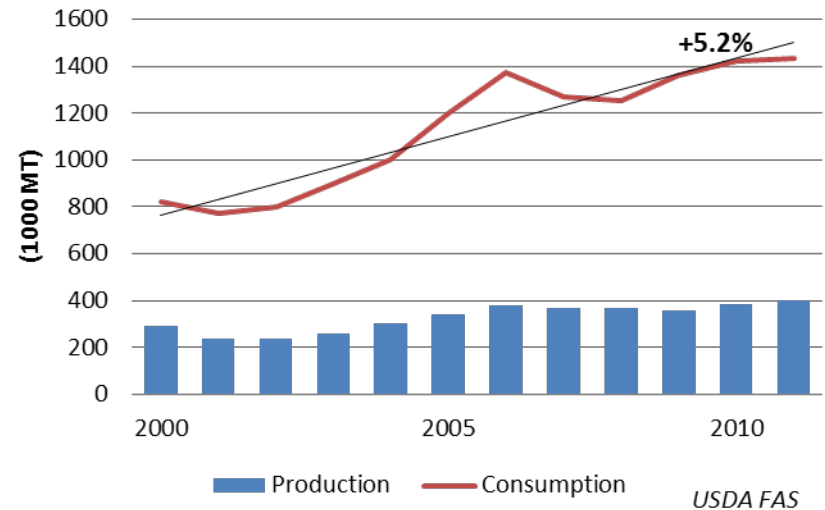
- Soybean oil consumption has been growing at an annual rate of 1.8% since 2000.
- Although production and consumption patterns differ across the region, it is clear that palm oil is the principal vegetable oil consumed.

Regional Consumption vs. Production

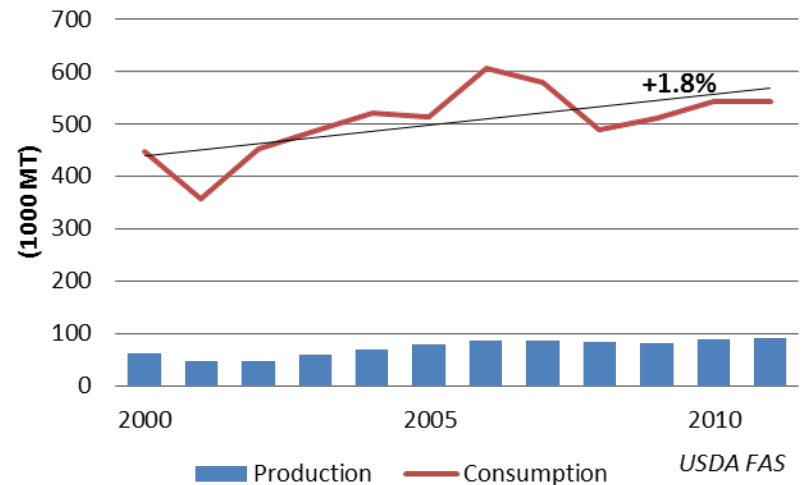
Soybeans



Soybean Meal



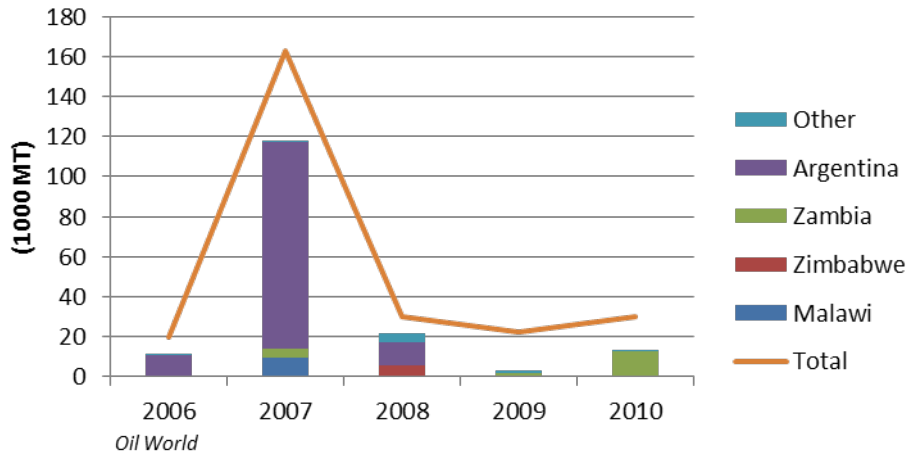
Soybean Oil



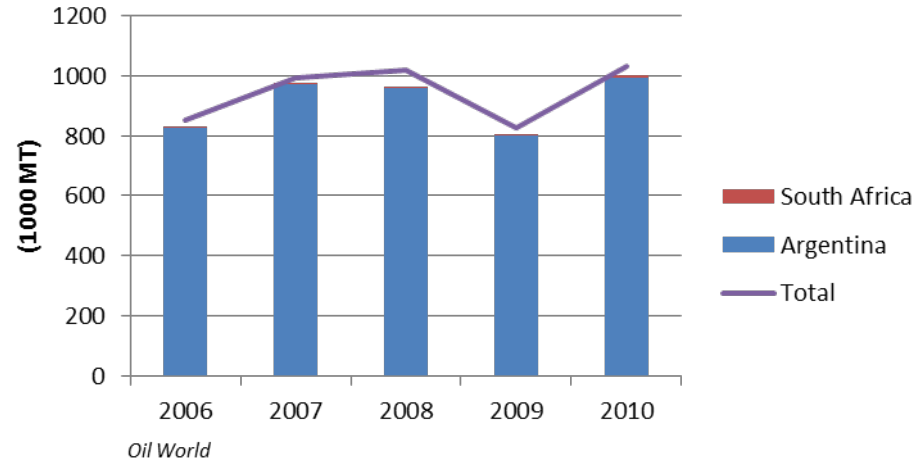
- In the Sub-Saharan African region, more soybean meal and soybean oil is consumed than is produced, demonstrating the need for imports or increased domestic production.
- For 2011, USDA FAS data indicates a production shortfall of 1 million MT soybean meal and 450,000 MT soybean oil.
- Since 2000, consumption of soybeans has been growing at 3.2%, consumption of soybean meal at 5.2%, and soybean oil consumption at 1.8%.
- These CAGRs indicate that consumption will likely be at the following levels by 2025:
 - Soybeans: 1,895,000 MT
 - Soybean Meal: 2,916,000 MT
 - Soybean Oil: 691,000 MT

Origins of Soy Complex Imports

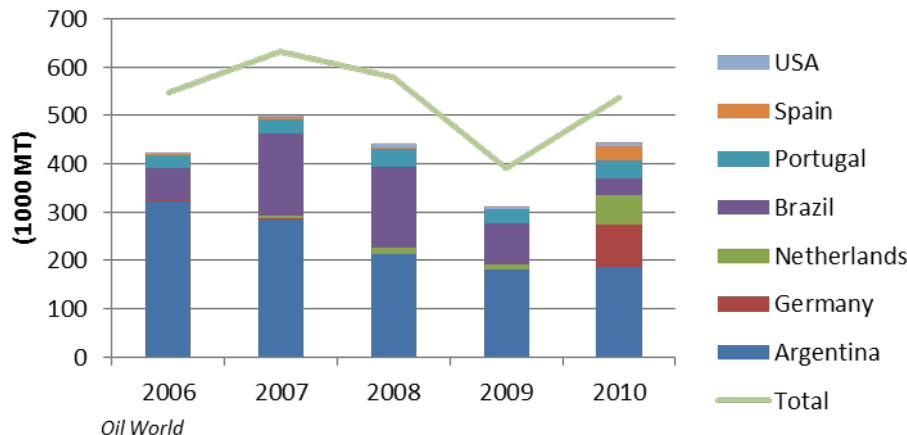
Soybean Imports - Source Countries



Soybean Meal Imports - Source Countries



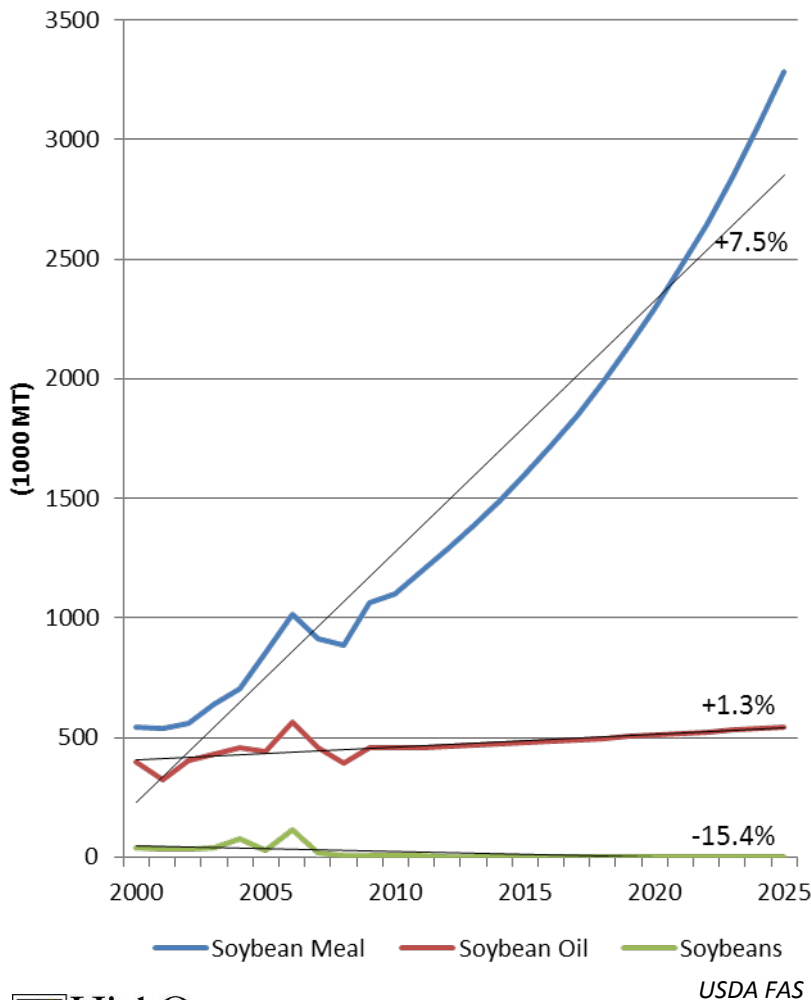
Soybean Oil Imports - Source Countries



- While soybean oil and especially soybean meal imports have been on the rise, soybean imports in Sub-Saharan Africa have declined from their peak in 2007, when domestic supplies in South Africa were particularly low and production was adjusting to keep up with demand.
- Oil World data indicates Sub-Saharan African soybean complex imports are dominated by a few origins:
 - Recently, the limited soybean imports originate in Zambia, a regional producer and exporter.
 - Argentina is primary importer of soybean meal and oil.
 - However, soybean oil imports origins are more varied, and notably include the US.

Soybean Meal and Oil Imports Slated to Increase

Region-Wide Soybean Complex Imports



- USDA data mirrors Oil World data, and shows that in Sub-Saharan African countries, soybean meal and soybean oil imports are projected to continue to increase through 2025, illustrating the potential for exporters of US soybeans and soybean products.
 - Soybean meal imports have been growing at an annual rate of 7.5% since 2000 as rising GDP per capita has led consumers to shift to higher protein diets. At the same time soybean processing capacity in the region is limited.
 - Soybean oil imports have been growing at an annual rate of 1.3% since 2000.
 - However, imports of soybeans have declined at an annual rate of 15.4% since 2000 due to increased production in South Africa and Southern Africa and a lack of soybean processing capacity.

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Investment in Agriculture: Summary

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 - Nigeria (palm and soy) Tanzania (row crops), Kenya (row crops), Ghana (palm plantations) and Mozambique (row crops) are the countries which receive the most bank credit allocated to agriculture.
 - The lack of bank credit makes it very difficult for importers to access goods and could give the US an import advantage over its primary competitors due to GSM-102 program.
- There has been limited investment in storage, processing and transportation infrastructure and these sums need to increase for Sub-Saharan Africa to meet its current deficit in soybean meal and oil production.

Commercial Farming: A Categorization

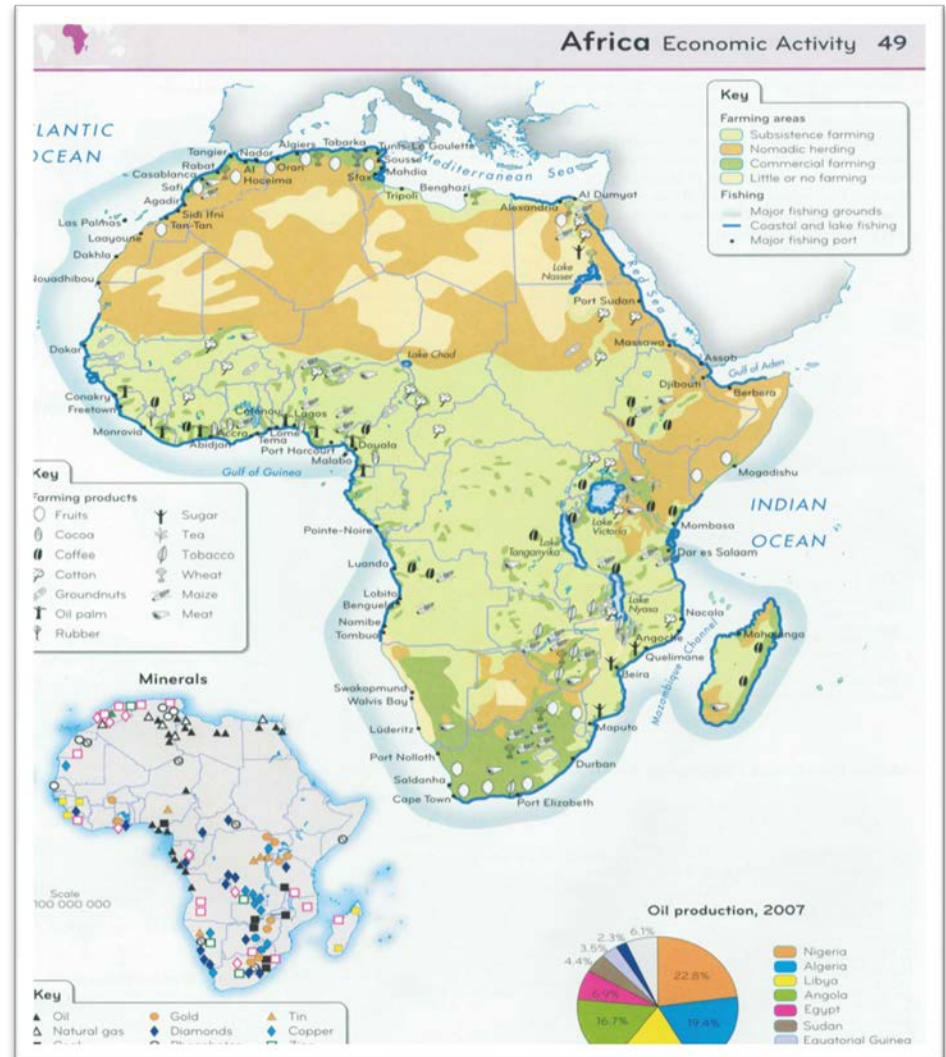
Commercial farms in Sub-Saharan Africa can be grouped into four classes.

1. **Commercial farms** are typically owned and managed by white farmers who stayed in Africa after the end of the colonial period.
2. **Emerging commercial farms** are surfacing, where wealthy African businessmen, politicians, and military leaders invest in farming operations. While these investments may be significant in size, they regularly lack required dedication, investment in management, equipment, and/or cash flow.
3. **Corporate farming businesses**, either domestic or multinational, have a corporate structure in place to manage multiple operations, some of which are listed companies. Investments range from \$5 million to \$100 million, and turnover may reach well over \$200 million.
 - Zambeef in Zambia is an example of such a corporate farming business.
4. **Parastatal farms** are farming operations, typically of large-scale plantation crops, owned by governments.
 - An example is the Cameroon Development Company, which employs 19,000 staff and operates over 12,000 ha of rubber, oil palm and banana crops.

Locating Commercial Farming

The Economic Activity map provides good insight into where commercial agriculture takes place.

- Commercial farming activities are concentrated in only three Sub-Saharan African countries: South Africa, Zimbabwe, and Namibia.
- However, South Africa is the only country with significant agricultural production in a wide range of sectors as Zimbabwe's land reform acts have forced commercial farmers off their land and Namibia's commercial farmers focus on cattle ranching.
- The Democratic Republic of Congo, although dotted with dark green (commercial farming, mainly oil palm) areas, has hardly any commercial agricultural activity.
- Smallholder cash crops including cocoa, tobacco, cotton, coffee, tea, and cashews, in addition to smallholder staples such as cassava, yams, maize, sorghum, millet, plantains, and rice, are extremely important and fragile economies in relation to rural income, employment, education, social security, opportunities to add value, and foreign exchange earnings.



Outside of South Africa, Commercial Farm Numbers are Low

While there are roughly 40,000 commercial farms in South Africa the combined number of commercial farms in a cross-section of 10 Sub-Saharan African countries is only 1.5%-3.5% of the number of commercial farms in South Africa.

- Over the last two decades, commercial farmer numbers in South Africa have steadily declined. While there were 57,980 farming units operational in 1993, only 39,992 remained so in 2007.
 - Voluntary sale, consolidation, and land redistribution explain the declining numbers.
- The gross farming income in 2007 was South African Rand (ZAR) 79.5 billion, or some US \$11.1 billion (1 ZAR = USD 0.14).
 - This equates to an average gross farm income of US \$278,000 per farming unit.
 - In 2007, the sector spread was 20% field crops, 24% horticultural products, 55% animal and animal products, and 1% other.
- The market value of these agricultural assets was US \$24.9 billion, the operating expenditure was US \$7.1 billion, the capital expenditure was US \$494 million, and the farming debt stood at US \$5.2 billion in 2007. The agricultural sector is a significant player in the South African money market, although it only represents around 4% of South Africa's GDP.

Number of Commercial Farms - Select SSA Countries

Country	Min	Max
Ghana	15	30
Nigeria	20	75
Angola	10	20
Cameroon	10	20
Zambia	200	400
Zimbabwe	150	300
Malawi	50	75
Mozambique	20	50
Tanzania	40	100
Ethiopia	30	60
Spread	540	1130

These estimates are based on expert know-how and cross verification with agribusiness parties in various countries.

- While Zimbabwe was once the second most important African country in terms of commercial farming, its commercial farm numbers have declined from approximately 4,500 to fewer than 300.
 - This has occurred during the past 10 years due to a chaotic land reform program and individual farm grab. Farm numbers continue to decline.

In Sub-Saharan Africa, Commercial Bank Lending to the Agricultural Sector Is Limited

In 2007, South Africa's farming debt was \$5.2 billion, comparable to that of the other 47 Sub-Saharan African nations combined.

Value of Commercial Bank Lending to the Agricultural Sector - Select SSA Countries (Million US\$)

Country	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008
Botswana	6.83	5.9	8.74	6.99	11.18	25.6	23.42	20.3	23.79	15.5
Gambia	-	-	-	-	-	-	-	-	9.12	7.96
Ghana	-	69.03	80.28	75.95	109.42	108.13	131.71	146.62	188.38	210.19
Kenya	-	320.4	290.93	322.99	360.78	388.83	455.87	465.06	437.8	381.54
Lesotho	-	-	-	-	-	-	-	0.19	2.04	9.31
Malawi	22.91	10.5	8.21	1.47	9.84	16.89	14.24	31.97	42.76	47.17
Mozambique	-	-	100.37	94.81	72.17	74.18	74.82	64.87	118.28	133.28
Nigeria	-	-	-	-	454.95	511.82	377.9	390.43	1286.16	814.76
Sierra Leone	-	0.72	1.58	0.31	0.77	1.04	1.14	0.6	2.32	3.33
Uganda	55.91	40.05	30.42	40.55	41.34	60.82	65.61	72.9	74.11	103.1
Tanzania	-	-	-	-	-	141.05	152.14	231.37	289.48	422.24

- With a population of 150 million, Nigeria is the largest financial market outside of South Africa in Sub-Saharan Africa.
- However, Nigerian agriculture borrowings are 6 times smaller than South Africa's, a nation with a population 30% the size of Nigeria's.
- Stanbic Bank in Uganda mentioned that it had an agribusiness loan portfolio of over \$250 million in 2010.
- Zanaco Bank in Zambia lends over \$100 million to the agricultural sector in 2011.
- Compared to the US, borrowings in the African agricultural sector are extremely small. Most farmers have no access to commercial bank lending.
 - Most soy crops in Africa are produced by smallholders - parties that are not part of the formal farming sector.
 - Exceptions include South Africa and Zambia, where most soybeans are produced by commercial famers operating 50-2,000 ha of soybeans each.

Private Equity for African Agriculture

- Henry Kravis, international financier and chairman of the large private equity (PE) firm Kohlberg, Gravis & Co (KKR), states that there are between US\$300 – 400 billion of private equity dollars looking for an investment home.
- Agriculture and farmland will absorb some of these private equity dollars. While developed economies are suffering from minimal growth rates, the developing world, including Sub-Saharan African countries, may represent attractive destinations for these investments.

Private Equity Funds for African Agriculture - An Overview

Fund Manager	Investment Vehicle	Target Countries	Year of Launch	Amount (Million US\$)
Actis	Actis Africa Agribusiness	Various	2006	93
Pearl Cap. Partners	Africa Agri Capital	Uganda	2010	12
Agro terra		Mozambique	2010	25
Altima Partners	Altima One World Agri Dev. Fund	Zambia, Various	2009	75
Beltone Agriculture	Mahaseel Agriculture Investment Fund	Sudan	2010	300
Chayton Capital	Chayton Atlas Agriculture Fund	Zambia	2009	50
Citadel Capital	Wafra	Sudan	2009	25
Duxton		Zambia & region	2009	50
Emergent Asset Mgmt.	African Land Fund	Various	2009	100
Feronia		DRC	2009	50
Future Growth	Old Mutual African Agricultural Fund	Various	2010	100
Future Growth	Future Growth Agri Fund	RSA	2010	125
Injaro Investments	W Africa SME Fund +Agri Investm. Fund	West Africa	2010	30
LHGP Asset Man.	Trans Farm Africa Fund	Various	2009	50
KIT	Annona Sustainable Investment Fund	Various	2009	11
Phatisa Fund Mgmt.	African Agriculture Fund	Various	2009	300
Pharos Miro		Tanzania	2010	50
Quifel	Quifel Agribusiness	Sierra Leone, Moz.	2009	67
Seedrock Group	Seedrock Agriculture	Mali, Burkino Faso	2010	25
Silverstreet Capital	Silverlands Fund	Zambia, Various	2009	100
SNS Asset Man.	SNS African Agriculture Fund	Various	2010	75
Zambika		Zambia	2010	50
Total				1,763

Private Equity for African Agriculture (Cont'd)

- The list on the previous page is not exhaustive for large-scale investments in African agriculture.
 - The \$80 million Schroder Agricultural Land Fund was announced in May of 2008, and believes that it can deliver investors a net return per annum of 10-15% over a 5 to 10 year period.
 - Jarch Capital reportedly leased 400,000 ha of land in South Sudan.
 - Abu Dhabi-based Al Qudra has acquired large tracts of land in Algeria and Morocco.
- The funds above are all private equity funds; there are however also significant volumes of equity from banks and foundations available.
 - The Trans Farm Africa Fund has been partly funded by foundations and has a more social charter than most other funds.
 - Funds with a more social charter require direct or indirect targeting of income improvement for smallholders through the investee company.
- Cliff Quisenberry, former portfolio manager at the Eaton Vance Tax - Managed Emerging Markets Fund who now runs his own fund, Caravan Capital, observed that until a few years ago, frontier investing in SSA and Eurasia was the discipline of a few dedicated funds but now mainstream investors are investing in the asset class.
 - Africa is a strong area of focus for his fund. He informs investors that in 2008, five of the ten fastest-growing economies in the world were in Africa. As an example of an African success story, he and others point to Zambeef Products, a Zambian agricultural enterprise that has grown from modest beginnings as a feedlot business in the mid-90s into a full fledged producer of poultry, cattle, grain, oilseeds and dairy products. From 2004 to 2008 its earnings increased by 25 – 30 % annually.
 - These high growth figures decreased in 2008 and 2009.

Downstream Investing

- Investments by these funds may also be allocated to upstream (inputs, etc.) or downstream (storage & handling) activities.
- Funds that specifically target downstream activities, rather than farming itself, include agro-processing and food funds:
 - Sanlam PE, based in Cape Town, South Africa, launched **Agri-Vie Agribusiness Investment Fund** in 2009 and is valued at \$100 million.
 - Silk Invest, based in London and the Hague, began managing **Africa Food Fund** in 2011; the fund is valued at \$75 million.
- The above funds are targeting returns of 10%-25% in agriculture, agribusiness, and food manufacturing investments in Sub-Saharan Africa. Southern Africa is the prime target area followed by Eastern and Western Africa, respectively, with little mention of Central Africa.
- Additionally, the African Food Fund and Mahaseel Agricultural Investment Fund plan to further invest a significant amount in Northern Africa.

Corporate Investing in African Farming

- Most plantation crops (including sugar cane, oil palm, rubber, tea, and bananas) are dominated by international corporations, and hundreds of millions of dollars are invested each year in these crops across Africa.
 - There has been a marked upswing in such investments since 2007, by groups such as British Sugar, Ilovo, Groupe Vilegrain, Tongaat Hulett, Sime Darby, Wilmar, SIVA, Olam, Chiquita, and Lonrho.
- Regardless, a number of plantations are still state owned, and in some instances privatized plantations and businesses may have fallen into the hands of politicians and military leaders.

Investment Firms in African Row Crop Farming - An Overview

Investment Firm	Originating Country	Country of Interest
Agrisol Energy	USA	Tanzania
Asian Global	USA	Tanzania, Mozambique
Agri Terra	London	Mozambique, Sierra Leone
Bonafarm	Hungary	Zambia
Scanfarm	Norway	Ghana
Ruchi Soya Industries	India	Ethiopia
Karuturi Global	India	Ethiopia

- In row crop farming, hundreds of foreign investors are active across Africa, and they may invest anything from \$100,000 to well over \$10 million in farming operations.
- Soil fertility is intimately linked to land values, and as soils become depleted of valuable organic matter, nutrients, and minerals, land values depreciate rather than appreciate.
- In Southern and Eastern Africa, commercial farming is undertaken by white farming families who have been working the land for one or multiple generations.

Development Finance Institutions

Development finance institutions encourage private-sector investment in Sub-Saharan African agriculture.

- International Finance Corporation (IFC) commits nearly \$20 million annually to the agribusiness sector in Sub-Saharan Africa.
 - IFC has the eventual goal of raising this commitment to \$100 million.
- German-based DEG is also active across the region, and deals with investments aimed at improving the production, processing, and distribution of agricultural products.

Overview of DFI's Investing in Africa

Development Finance Institute	Originating Country
African Development Bank	African Union
CDC	UK
DEG	Germany
FMO	Netherlands
IFC	USA
PROPARCO	France
PTA Bank	COMESA Region
NORFUND	Norway
SWEDFUND	Sweden
IDC	South Africa
DBSA	South Africa

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Selection Matrix: Introduction

- Of the 48 countries comprising Sub-Saharan Africa, not all of these countries are equally important to potential exporters of the US soybean complex. In other terms, US soybean exports are not equally competitive in all Sub-Saharan African countries.
- A reduction of the sample size to include some of the countries with the highest potential, as well as some of those indicative of a particular situation (e.g. political instability, landlocked, etc.) provides a clearer picture of the state of the soy complex value chain and the potential for new exports in the region.
- To begin evaluating the Sub-Saharan African market, HighQuest Partners ranked all countries by devising a selection matrix based on relevant variables. After considering the variables and viewing the scores, HighQuest developed a list of countries that represent the market .

Selection Matrix: Methodology

A total of 12 weighted variables clustered in 6 categories allow countries to be sorted into categories that reflect a range of potential for soybean complex imports, from extremely high to extremely low:

1. Soybean Complex
 - a. Soybean Production
 - b. Soybean Complex Imports
2. Population
 - a. Total Population
 - b. Urbanization
3. Consumption
 - a. Protein Sources
 - b. Vegetable Oils
4. Business
 - a. Ease of Doing Business
 - b. Perceived Corruption
5. Trade
 - a. Overall US Imports
 - b. Logistics Performance Index
 - c. Import Costs
6. Other
 - a. GMO Public Policy

Selection Matrix: Methodology

- With the exception of the GMO Public Policy variable, each country was ranked and given a score between 1 and 48, with 48 reflecting the highest potential for soy complex exports. GMO Public Policy was treated as a binary variable.
- After the countries were ranked per variable, rankings were weighted, summed, and a final score resulted.
- The ranked countries were sorted into 5 groups:
 1. Extremely High Potential
 2. High Potential
 3. Medium Potential
 4. Low Potential
 5. Extremely Low Potential
- Countries selected from the Extremely High Potential group:
 1. South Africa
 2. Kenya
 3. Nigeria
 4. Tanzania
- Countries selected from the High Potential group:
 5. Ethiopia
 6. Ghana
 7. Senegal
 8. Zambia
- Countries selected from the Medium Potential group:
 9. Angola
 10. Mozambique
- Lastly, a country was selected from the Low Potential group:
 11. Zimbabwe
- No countries were examined from the Extremely Low Potential group, as they were not viewed as priorities for exporters.

Selection Matrix: Ranking

Sub-Saharan African Countries		Total Score
Extremely High Potential		
1	<i>South Africa</i>	40.1
2	<i>Kenya</i>	35.3
3	<i>Nigeria</i>	35.3
4	<i>Tanzania</i>	32.2
5	<i>Uganda</i>	30.6
High Potential		
6	<i>Ethiopia</i>	30.5
7	<i>Ghana</i>	28.3
8	<i>Senegal</i>	26.6
9	<i>Zambia</i>	26.2
10	<i>Cameroon</i>	26.1
Medium Potential		
11	<i>Malawi</i>	26.0
12	<i>Angola</i>	25.7
13	<i>Mozambique</i>	25.5
14	<i>Congo DR</i>	25.3
15	<i>Madagascar</i>	25.3
Low Potential		
16	<i>Benin</i>	25.1
17	<i>Zimbabwe</i>	25.0
18	<i>Burkina Faso</i>	24.3
19	<i>Côte d'Ivoire</i>	23.6
20	<i>Rwanda</i>	22.2

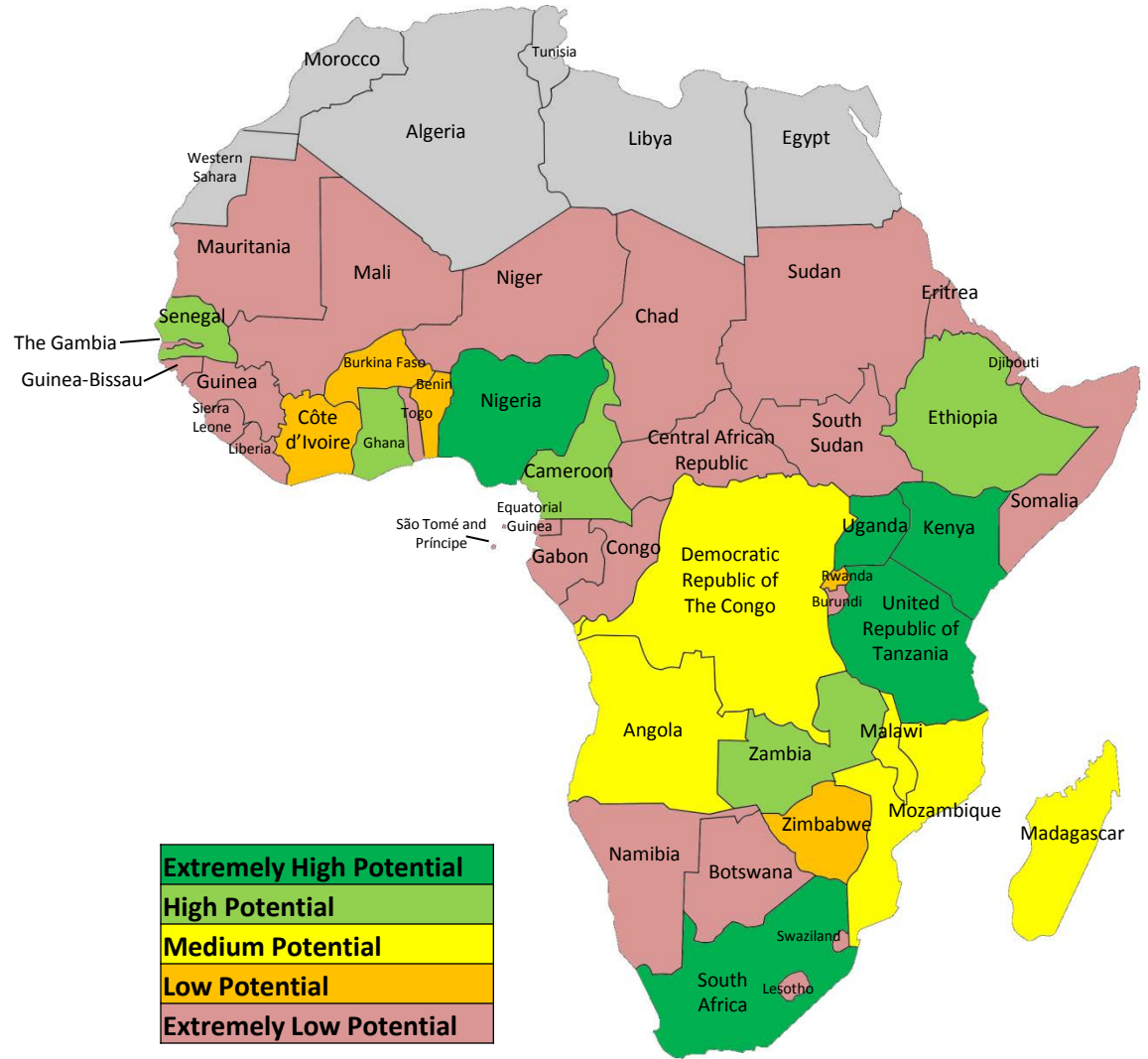
Sub-Saharan African Countries		Total Score
Extremely Low Potential		
21	<i>Sudan</i>	21.2
22	<i>Liberia</i>	20.9
23	<i>Mali</i>	20.8
24	<i>Niger</i>	20.4
25	<i>Mauritius</i>	19.8
26	<i>Guinea</i>	19.5
27	<i>Gabon</i>	18.7
28	<i>Congo R</i>	17.7
29	<i>Togo</i>	17.1
30	<i>Gambia</i>	17.1
31	<i>Mauritania</i>	17.1
32	<i>Botswana</i>	16.6
33	<i>Sierra Leone</i>	16.3
34	<i>Namibia</i>	15.5
35	<i>Burundi</i>	13.4
36	<i>Chad</i>	13.2
37	<i>Djibouti</i>	12.9
38	<i>Cape Verde</i>	12.2
39	<i>Seychelles</i>	12.2
40	<i>Eritrea</i>	11.5
41	<i>Swaziland</i>	11.0
42	<i>Lesotho</i>	10.1
43	<i>Guinea-Bissau</i>	9.1
44	<i>Sao Tome and Principe</i>	8.5
45	<i>Central African Republic</i>	8.2
46	<i>Equatorial Guinea</i>	7.6
47	<i>Comoros</i>	7.1
48	<i>Somalia</i>	4.7

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Country Analyses

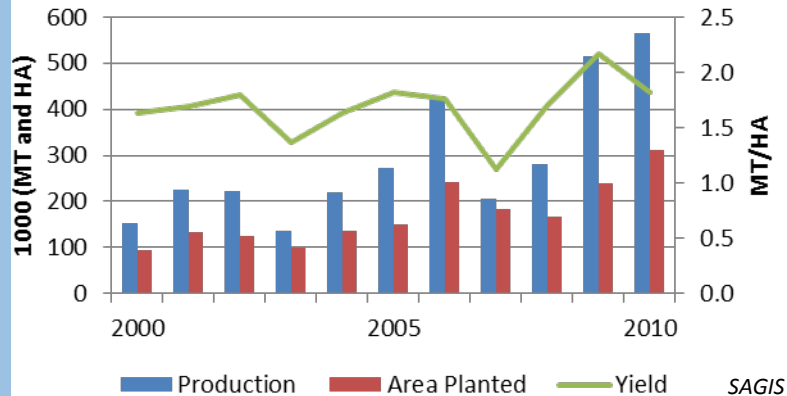
- South Africa
- West Africa
 - Senegal
 - Ghana
 - Nigeria
- Southern Africa
 - Angola
 - Zimbabwe
 - Mozambique
 - Zambia
- East Africa
 - Kenya
 - Ethiopia
 - Tanzania



Country Analysis: South Africa

South Africa leads the region in soybean production and processing.

South African Soybean Production

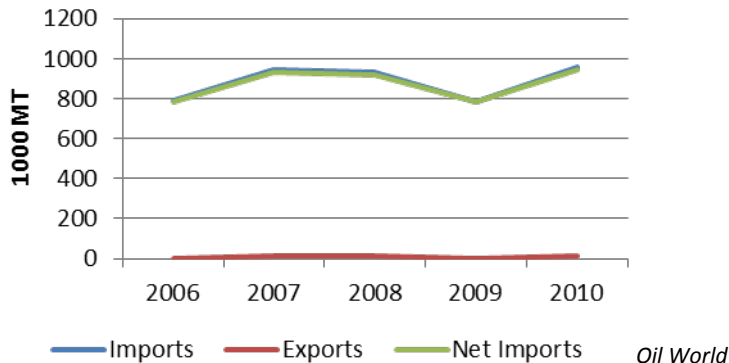


- South Africa leads Sub-Saharan Africa in soy complex production, processing, and consumption: 2011 soybean production is estimated to be around 700,000 MT.
- Additionally, the country's accepting stance towards GMO sets it apart from all other countries in the region.
- CAGRs reveal that since 2000, soybean production and area harvested have grown together at rates of 14% and 13% respectively; yields have been comparatively static, with a CAGR of 1%.

- South African soybean production has been expanding rapidly since 2007.
- The processing capacity has been expanding in order to keep up with demand for soybean products, especially soybean meal.
 - Annual soybean meal demand is about 1.2 million MT.
- The country's key players in high-protein soybean meal processing include Majesty Oil, Nedan Oils, Gauteng Oils, and Specialized Protein Products.
 - These companies' current processing capacity totals 127,000 MT, and is slated to increase by 200,000 MT.
 - Imports, primarily from Argentina, supplement this production.
- The country's key players in full-fat soybean processing include Majesty Oil, Meadows, Prodsure, Afagri Foods, and Sovereign Foods.
 - Current 534,000 MT processing will be supplemented by an additional 33,000 MT processing capacity.
- Although some processors (Willowton, Epko, and Conti-Oil) reportedly process both soybeans and sunflowers, NAMC estimates just 30% ($\approx 360,000$ MT) of this dual processing capacity went to processing soybeans.
- Despite increasing production and processing capacity, South Africa imports around 900,000 MT Argentine soybean meal each year.
 - Seaboard imports are 70,000 MT each month from Argentina.
 - Atlas Shipping is another significant importer of soybean meal.

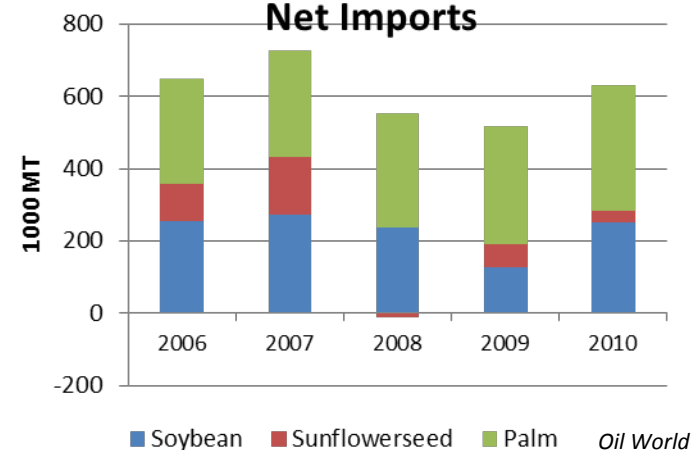
Country Analysis: South Africa (Cont'd)

South African Soybean Meal Trade Balance



- Argentine soybean meal imports are significant, and have comprised between 97% and 100% of total soybean meal imports to South Africa since 2006. Most recently, South Africa imported nearly 960,000 MT of soybean meal.
- Data indicates that soybean meal exports are received exclusively by other Sub-Saharan African countries, namely Mozambique and Mauritius, and totaled roughly 14,000 MT in 2010.

South African Vegetable Oils Net Imports

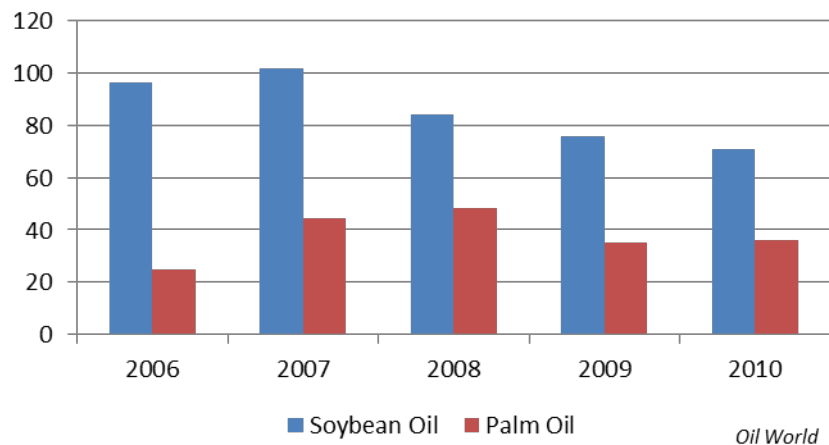


- South Africa is a net importer of soybean oil.
- In 2010, soybean oil imports (37% of oil imports) primarily originated in Argentina, Germany, and the Netherlands, sunflowerseed oil imports (15% of oil imports) came from Argentina, and palm oil imports (48% of oil imports) originated in Indonesia and Malaysia.

Country Analysis: Senegal

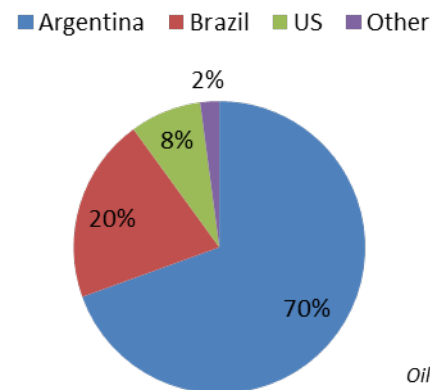
In Senegal, soybean oil has the greatest export potential: the US supplies 8% of Senegalese soybean oil imports.

Senegalese Vegetable Oil Imports



- Dakar is the closest Sub-Saharan African port to the United States, and represents a gateway to Senegal and other West African markets.
- In 2010, the US supplied Senegal with 5,600 MT soybean oil – 8% of total imports.
- Argentina dominated Senegal’s soybean oil import market, supplying the country with nearly 50,000 MT.
- Côte d’Ivoire, followed by Malaysia and Indonesia, supply Senegal with competing refined palm oil.
- Soybean oil imports are twice double those of palm oil imports, and established palm oil import standards due to protectionist policies may encourage more soybean oil imports in the future.

2010 Senegalese Soybean Oil Imports

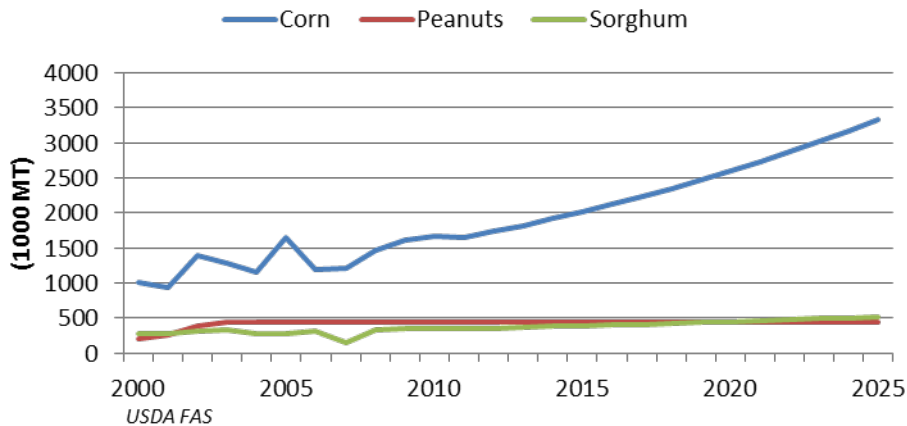


- The USDA’s Dakar offices report Suneor is the country’s primary importer of soybean oil.
- Suneor imports crude soybean oil, and refines it at various production sites.
- Suneor predominately processes peanut oil to supply the European import market.
- Exportation of peanut oil necessitates other edible oils’ imports.

Country Analysis: Ghana

The rising cost of fishmeal in Ghana has made soybean meal more attractive.

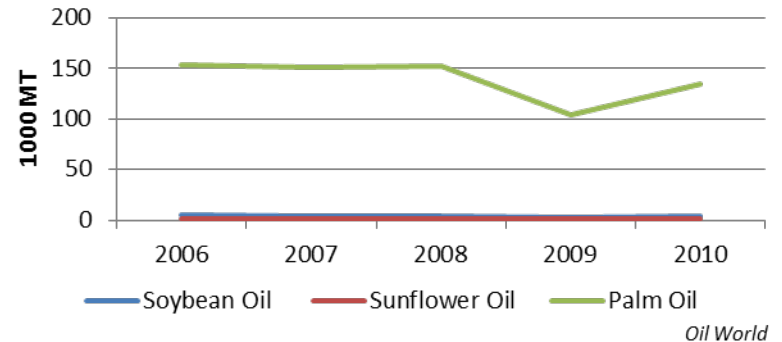
Ghanaian Crop Production



- Soybeans are currently not considered a major crop in Ghana.
 - The Ghanaian Ministry of Food and Agriculture reports 145,000 MT of soybeans were produced in 2010, up nearly 30% from 2009.
 - Soybeans are predominately grown by smallholders, but a growing number of commercial farmers are becoming involved in soybean production.
- Crops such as corn and peanuts are more dominant in local production.

- Soybean meal processors in Ghana include Ghana Nuts, Greater Accra Poultry Association, and GAFCO.
 - Although Ghana Nuts specializes in domestically-sourced groundnut meal, it is also an importer of soybean meal.
- Processors of soybeans note that the increasing cost of fishmeal has made soybean meal more attractive as a feed ingredient, especially for poultry feed.

Ghanaian Vegetable Oil Imports

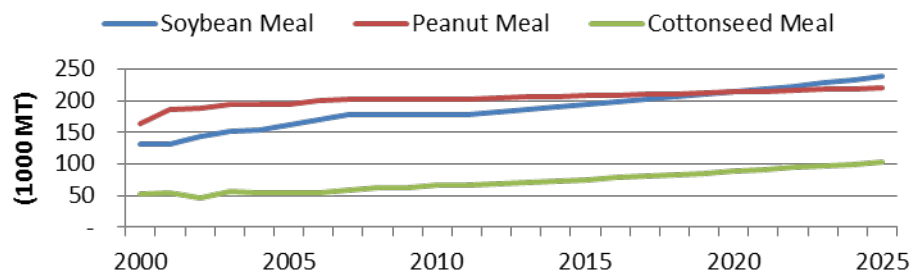


- In Ghana, soybean oil competes with palm oil.
- Soybean oil imports amounted to 3,600 MT in 2010 and sunflower oil imports totaled 1,600 MT.
- Palm oil imports neared 150,000 MT.

Country Analysis: Nigeria

Nigerian soybean meal demand outpaces supply, but processing capacity is set to expand.

Nigerian Meal Production

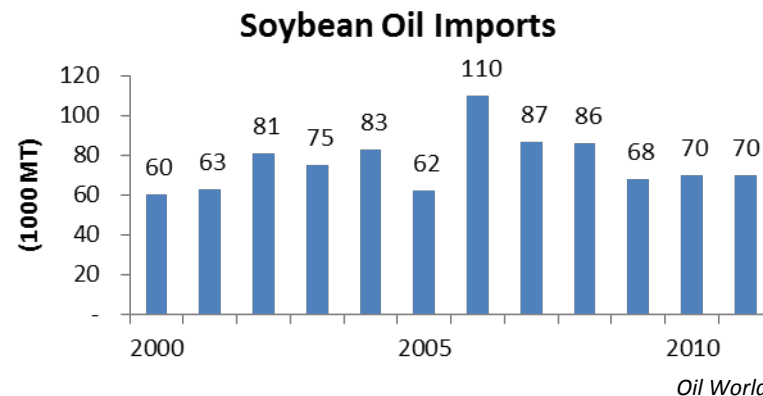
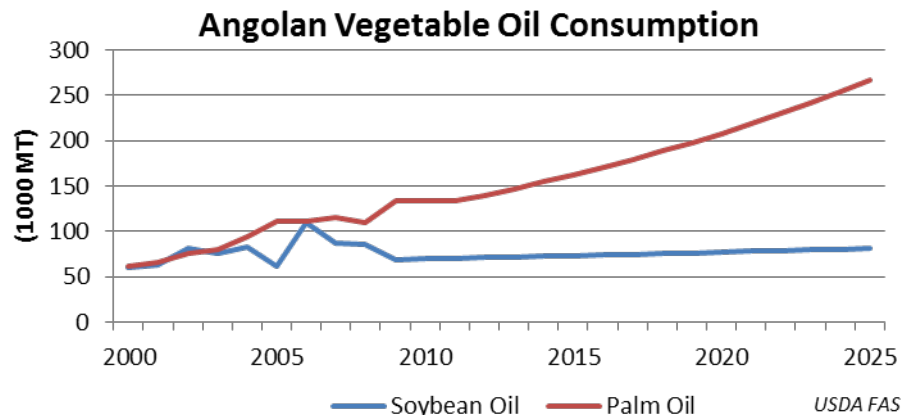


USDA FAS

- Soybean production in Nigeria is estimated to be in excess of 500,000 MT in 2011.
 - Despite this production, domestic output lags demand and the price of soybeans and soy products are high.
- Feed millers estimate Nigeria needs 240,000 MT soybean meal each year.
 - Soybeans are increasingly being promoted for human consumption as a cheaper source of protein, but the feed industry dominates demand.
 - Roughly 100,000 MT of soybean meal imports are required.
 - Argentina is a primary supplier of soybean meal imports.
 - Peanut meal is sometimes used as a substitute protein.
- Nigeria's Grand Cereals crushes 40,000 MT soybeans annually.
 - Soybeans come from local sources, as logistical problems impede imports.
 - 40,000 MT of soybean crushing does not satisfy their demand for soybean oil, and Grand Cereals buys crude oil from other soybean crushers to cover this shortfall and refine 10,000 MT annually.
- Bendel Feeds buys 6,000 MT of soybean meal per year from local processors.
- Amo Byng Nig Limited buys locally produced soybean meal.
 - Although it prefers soybean meal, the company also uses substitute, cheaper meals – specifically peanut meal – to minimize costs.
- Livestock Feeds is processing about 4,000 MT soybeans annually for livestock feed.
- Karma Foods Limited announced it would establish a 75,000 MT soybean processing plant.
 - Karma Foods intends to source soybeans exclusively from Nigerian soybean farmers, and hopes to guarantee a market for domestic soybeans.

Country Analysis: Angola

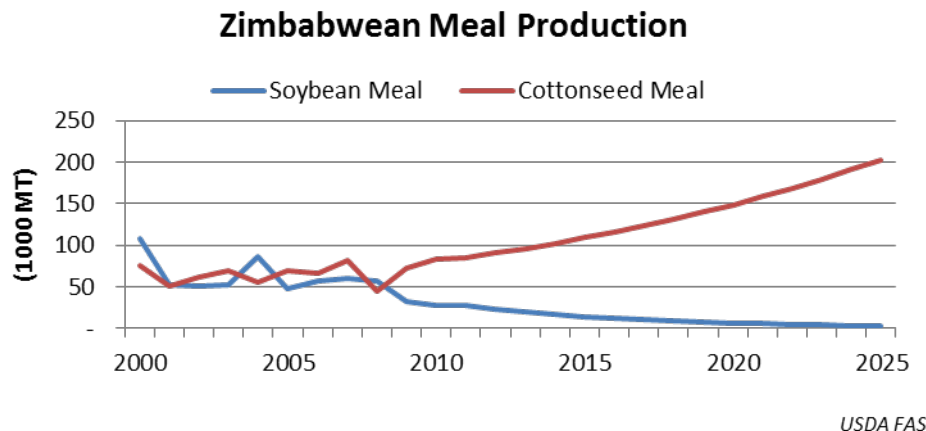
Angola is an importer of soybean oil due to its limited soybean processing capacity.



- Angola imported 70,000 MT soybean oil in 2010.
 - Angola lacks soybean oil processing capacity, suggesting its continued reliance on imports.
- Domestically produced and imported palm oil is the most competitive substitute for soybean oil.
 - Palm oil production in Angola has been static at 58,000 MT over the past 10 years.
 - Domestic production is supplemented by approximately 100,000 MT imports.
 - Angola exports roughly 30,000 MT palm oil.
 - Palm oil consumption is projected to grow at 5% annually compared to soybean oil's 1% growth.
- Although the USDA does not report soybean production in Angola, TechnoServe estimates that commercial farmers grow approximately 15,000 MT of soybeans.
 - Commercial farmers are responsible for the bulk of this production.

Country Analysis: Zimbabwe

Economic instability and land reform initiatives caused soybean and other crop production to plummet. Production is increasing as is soybean processing and feed milling.



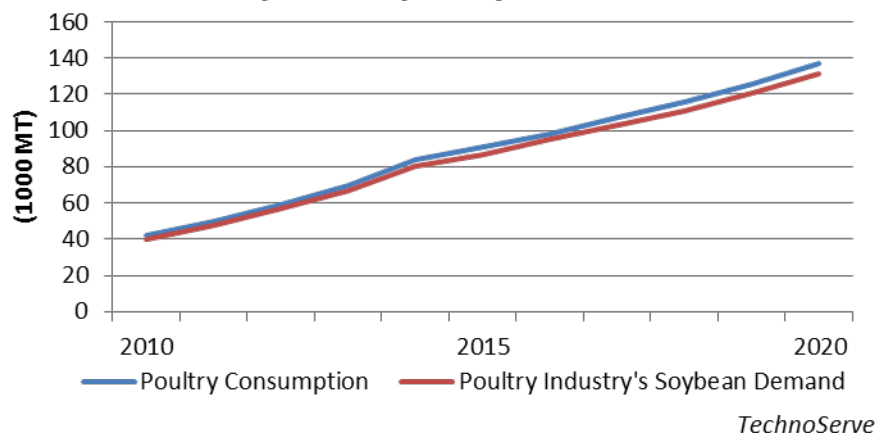
- Zimbabwe's 2011 soybean production is 37,000 MT.
- Notwithstanding land reform, recent reports indicate commercial farming accounts for 65% of domestic soybean production.
- Soybean meal production projections are dramatically decreased by recent declines in production.
- However, interviews indicate Zimbabwean producers and processors anticipate production to revert to earlier levels and grow throughout the forecasted period.
- TechnoServe estimates that only 16% of soybean processing capacity is being utilized because of soybean supply constraints.
- Surface Investments is Zimbabwe's largest soybean processor, producing soybean meal and soybean oil.
 - Although production is intimately linked to supply, Surface Investments recently expanded its processing capacity to 270,000 liters of soybean oil and 750 MT soybean meal per day.
- Although other processors exist, the only other companies still utilizing soybeans are Olivine and United Refineries.
- Since domestic production has not completely rebounded, Zimbabwe must import soybean meal to meet monthly domestic demand of about 9,000 MT.
 - The majority of imports come from India.
 - Some imports originate in Malawi, but the landed price driven by transportation costs often makes soybean meal imports from Malawi cost prohibitive.
 - While Zimbabwe would like to import from Zambia, Zambia has placed export restrictions on soybean meal exports to Zimbabwe.

County Analysis: Mozambique

Mozambique's expanding poultry industry demands soybean meal.

- Soybean production in Mozambique is growing: 2010 domestic production of 12,000 MT is expected to increase to as much as 18,000 MT soybeans in the 2011 crop year.
- Demand for soybean meal is outpacing soybean production growth: the country's growing poultry industry requires soybean meal for its inclusion in poultry feed – roughly 30% of raw feed material.
- The Poultry Association of Mozambique estimates that current broiler production in Mozambique requires 36,000 MT soybean meal, and the USDA estimates 50,000 MT is required overall for livestock feed.
- TechnoServe projects 19% growth in poultry consumption through 2014, followed by 8.6% growth.
- Northern feed millers and poultry manufacturers, in Mozambique's soybean production zone, include GETT and Novos Horizontes.
 - GETT has processed 600 MT of soybeans for soybean meal in 2011. Additionally, the company has imported 2000 MT of Brazilian soybean meal.
 - Novos Horizontes reports using 70 MT of soybean meal each week. The company plans to expand processing capacity from what it is today: 0.8 MT/hr.
- Centrally located Abilio Antunes processes 3 MT soybean meal daily from locally sourced beans, but also imports batches of Brazilian soybean meal. Abilio Antunes plans to double annual processing capacity to 18,000 MT shortly.
- In the South, the main consumers of soybean meal include HIGEST and CIM, both located near the epicenter of demand for poultry. TechnoServe indicates this region imports around 25,000 MT soybeans each year.
 - HIGEST has a daily processing capacity of 3MT/day, which goes underutilized, as management finds local soybeans prohibitively expensive. HIGEST imports around 6,000 MT soybean meal for feed production.
 - TechnoServe estimates CIM is responsible for much of the remaining regional imports.
- Brazil and Japan have negotiated with the Mozambican government to develop significant commercial soybean production and increase logistical and processing infrastructure. In light of this news, some poultry producers estimate the window for receiving soybean meal imports to last another 5 to 7 years.

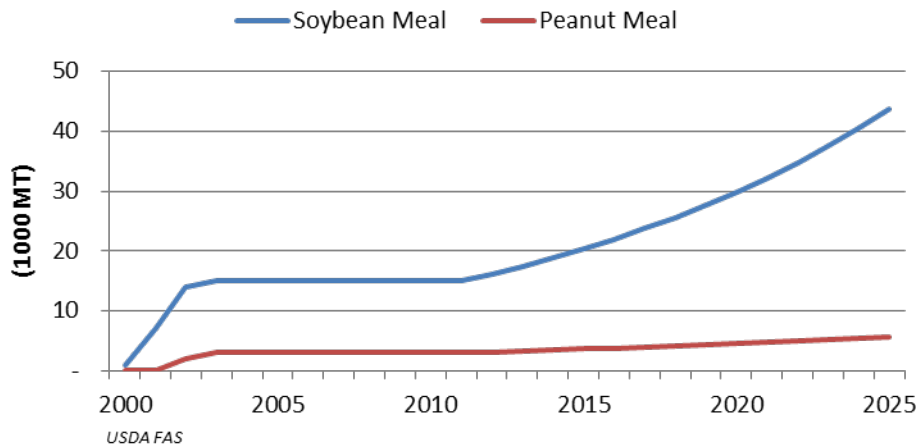
Poultry Industry's Projected Growth



Country Analysis: Zambia

After South Africa, Zambia has the most highly developed farming, livestock feed, and poultry value chain in Africa.

Zambian Meal Production

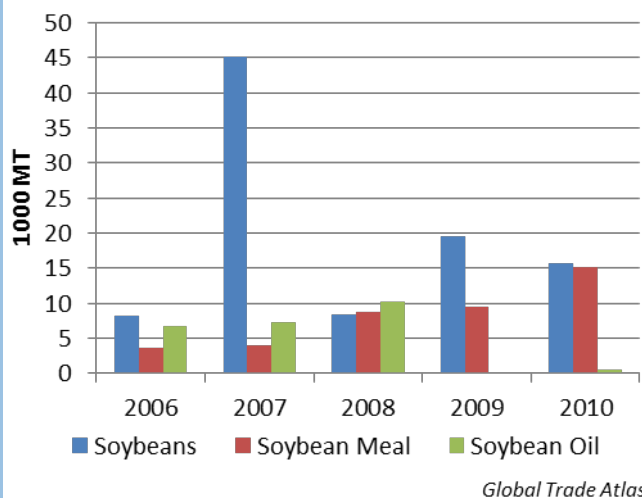


- Current data from TechnoServe estimates Zambian soybean production to be 112,000 MT.
- Since it has vast swaths of undeveloped land, Zambia has vast potential for expanding production.
- The trading and shipping company Zdenakie estimates 2011-2012 soybean meal imports in Zambia will total 25,000 MT to complement domestic production.
- Zdenakie is a soybean meal shipper and imports from India.
 - While the minimum bulk shipment size (to Beira, Mozambique) is 12,500 MT, containers can be of many sizes. After imports reach Beira, they can be trucked to Zambia and Zimbabwe.
- Zamanita will raise 35,000 MT of soybeans for soybean meal and oil production.
 - The company has 75,000 MT processing capacity which will increase to 90,000 MT processing capacity by 2012.
 - Zamanita produces 600-700 MT soybean oil annually.
- Novatek is a feed miller processing 5,000-6,000 MT each month, 20% of which is soybean based.
- Seba Foods processes 4,000 MT soybeans every year.
- Nutri Feed processes an average of 1,000 MT soybeans per month, but it has the capacity to process 4,500 MT monthly – the company cites the seasonality of demand for this behavior.
- National Milling Johannes processes 200 MT of full-fat soybeans for feed incorporation each week.

Country Analysis: Kenya

Indian soybean meal exports to Kenya are highly competitive and satisfy GMO-free requirements.

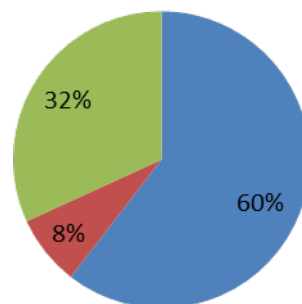
Kenyan Soybean Complex Imports



- Kenya's Agricultural Research Institute estimates that 90% of the soybean market goes towards livestock feed, suggesting soybean meal, not edible oil, should be the priority of potential soybean exporters.
- The World Trade Atlas data indicates Kenyan soybean meal imports totaled 15,000 MT in 2010.
- However, Seaboard estimated it will import 20,000 MT of soybean meal into Kenya this year.

2010 Kenyan Soybean Meal Imports

■ India ■ Netherlands ■ Uganda



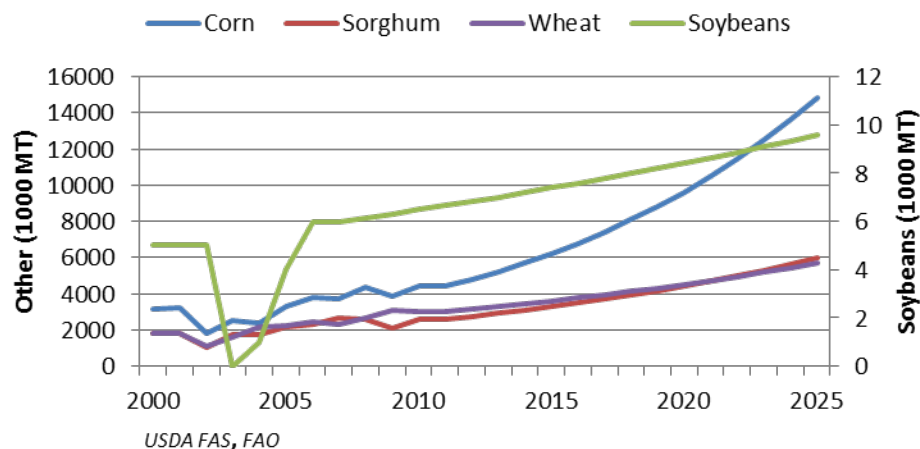
Global Trade Atlas

- Unga Feeds imports Indian soybean meal for incorporation in the feed it processes. On average, these imports amount to 1,200 MT every month.
- Kenya's Pembe Feeds imported approximately 500 MT soybean meal, also from India, in 2010.
- The limited oil processing and refining capacity is predominately devoted to palm oil.
- Interviews indicate soybean oil is unpopular or unknown to consumers: Oil processors need the support of consumer knowledge regarding the product.
- Bidco imports between 500 to 1,000 MT crude soybean oil from the United States and Argentina annually.
 - A Bidco team leader cites import sourcing difficulty as an impediment to increased use.
 - 95% of the oil this processor produces is palm oil.
- Kapa Oil Industries imports crude soybean oil in 2,000 MT quantities every 12-18 months as needed.
 - Kapa explained 90% of the soybean oil it processes goes to paint manufacturing.

Country Analysis: Ethiopia

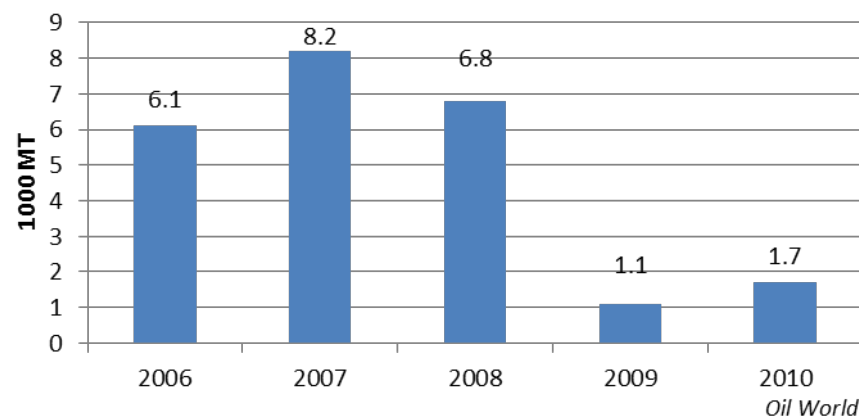
Ethiopian soybean production projections do not reflect Indian investment.

Ethiopian Crop Production



- FAO data indicates soybean production peaked in 2007 with the production of 6,000 MT, and production is projected to increase at a rate of nearly 3% through 2025.
- This projection does not factor in the agreement between the Ethiopian government and the Indian company Ruchi Soya.
 - In May 2010, Ruchi acquired 60,000 acres in a 25-year lease, and may increase to more than 120,000 acres.
 - A first mover in the Ethiopian soy market, Ruchi plans to both grow soybeans and establish processing facilities, which will dramatically increase production and begin to shape future import demand.

Ethiopian Soybean Oil Imports

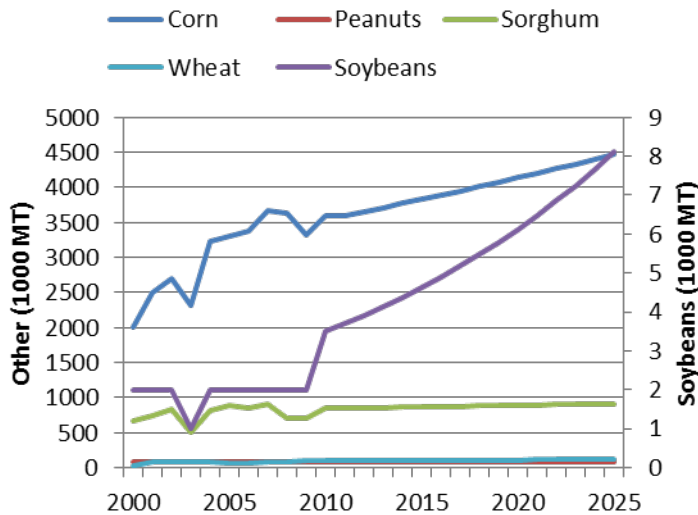


- A report released by the Dutch Agricultural Economics Research Institute (LEI) noted that while Ethiopia exports oilseeds, these revenues go to finance the imports of edible oils.
- Vegetable oil consumption is projected to increase through 2025. Palm oil dominates consumption, in part because of consumers' hesitation regarding soybean oil's smell and taste.
- Ethiopia soybean oil imports totaled 1,700 MT in 2010.

Country Analysis: Tanzania

An ambitious national Soybean Development Strategy aims to maximize soybean production by 2020.

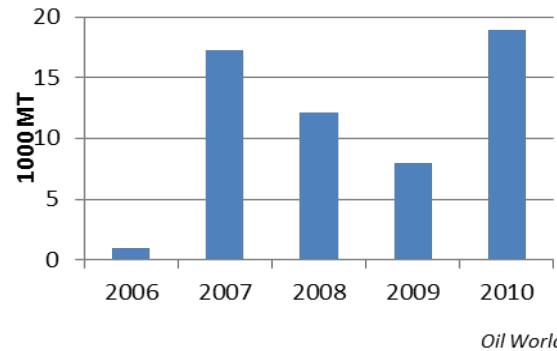
Tanzanian Crop Production



USDA FAS, FAO, Tanzania Ministry of Agriculture, Food Security and Cooperatives

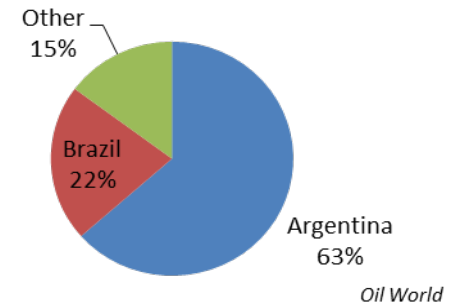
- The Tanzanian government's most recent estimate of production was 3,500 MT. Given this production, an annual growth rate is projected of 5.8%.
- Tanzania's Soybean Development Strategy has the ambitious goal of maximizing soybean production in Tanzania and aims to raise production to 2 million MT by 2020.

Tanzanian Soybean Oil Imports



Oil World

2010 Tanzanian Soybean Oil Imports



Oil World

- In the vegetable oils market, in 2010, 63% of Tanzania's 19,000 MT soybean oil imports were Argentine. Brazil followed, supplying 4,000 MT.
- East African Grains Council member company FRABHO Enterprises Ltd explains that in Tanzania, soybeans are being incorporated in food for human nutrition, while the biggest market for increased use – as in other Sub-Saharan African countries – may be in the livestock feeds industry.

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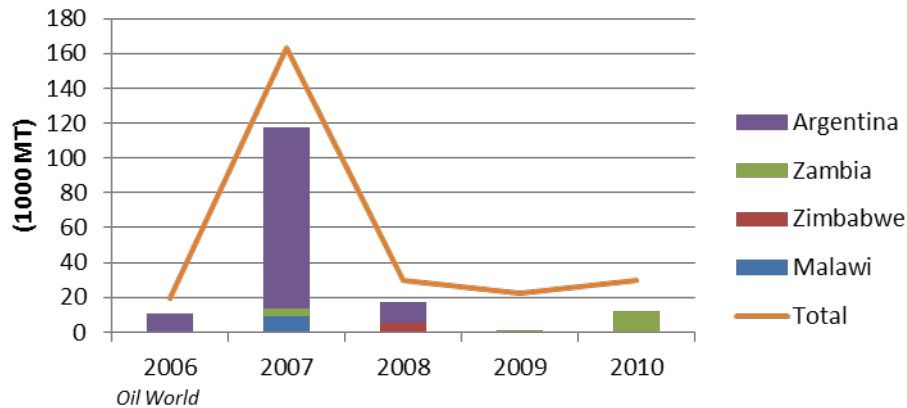
- Executive Summary
- Regional Overview
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- Soybean Value Chains
- Trade Flows
- Landed Price Analysis
- Public Policies
- Conclusions – SWOT Analyses

Trade Flows: Summary

- Soybean imports into Sub-Saharan Africa are very limited due to a lack of processing capacity and the fact that the region grows sufficient soybeans to support its current processing infrastructure, but soybean meal and oil trade is high and expected to increase as projected GDP per capita increases lead to increased consumption of animal protein and cooking oil.
 - Argentina is the dominant importer of soybean meal and oil followed by the EU and Brazil
- Sub-Saharan African exports of soybeans, soybean meal and soybean oil are dominated by intraregional trade.
 - 4 intraregional trade groups, the Economic Community of West African States (ECOWAS), the East African Community (EAC), the Common Market for Eastern and Southern African (COMESA) and the South African Development Community (SADC), have been developed to promote intraregional trade and eliminate customs barriers.
 - In some ways, these groups have been successful, but there is a real worry that protectionism, and the fact that several countries belong to two or more of these regional trade agreements with competing agendas, could limit the effectiveness of these regional trade agreements.
- Many consumers in Sub-Saharan Africa prefer palm oil to soybean and sunflower oil due to its price, local availability and taste.
 - Sub-Saharan Africa does not produce sufficient quantities of palm oil to meet demand and imports come from Malaysia and Indonesia.

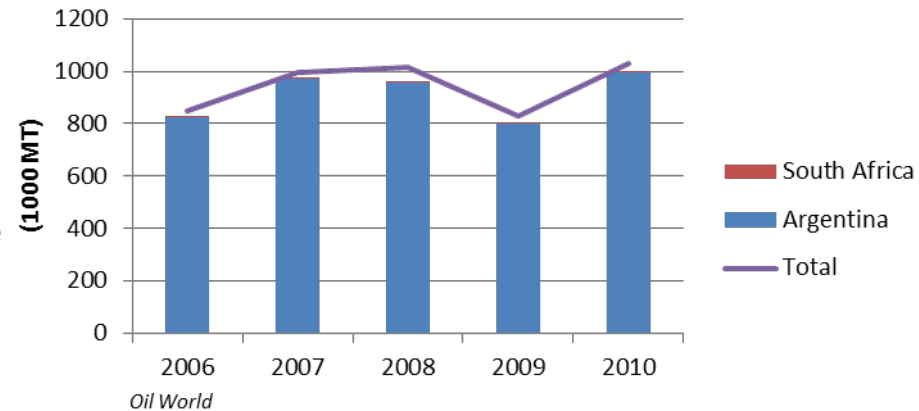
Sub-Saharan African Trade Flows

Total Sub-Saharan Soybean Imports – Source Countries



- Taken as a whole, Sub-Saharan African countries imported nearly 30,000 MT of soybeans in 2010.
- South Africa imported significant quantities of Argentine soybeans in 2007, causing a spike in total imports. Domestic soybean production was in the process of increasing, and significant Argentine imports were required to meet demand. Recently, the country's production has expanded, imports have declined, and South Africa's 2010 imports were sourced from neighboring Zambia.

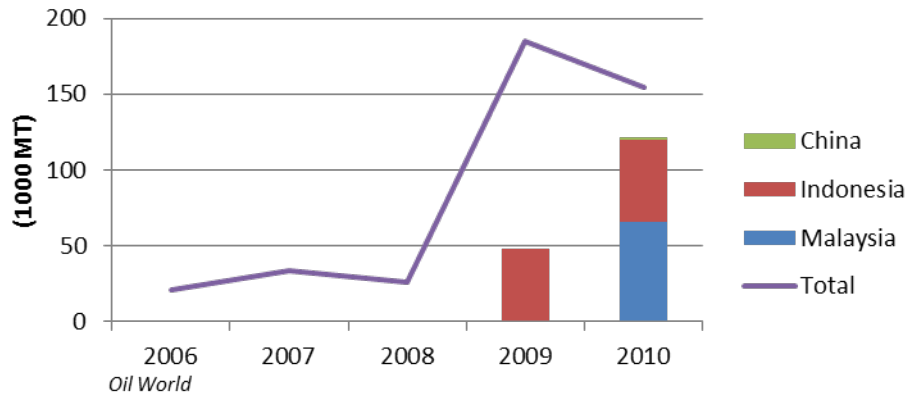
Total Sub-Saharan Soybean Meal Imports - Source Countries



- While Sub-Saharan soybean imports have been more volatile, soybean meal imports have been comparatively static.
- Argentina is the dominant supplier of soybean meal to the region.
- In 2010, 96% of the region's imports were from Argentina.
- Regarding intraregional trade, South Africa plays a small role in supplying the region with soybean meal – 7,000 MT in 2010.

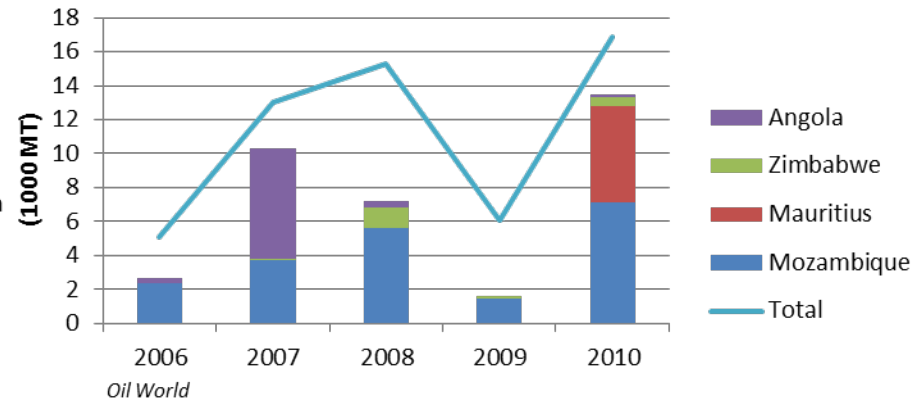
Sub-Saharan African Trade Flows

Sub-Saharan Soybean Exports – Receiving Countries



- Asian countries, especially Malaysia and Indonesia, comprise the largest export markets for Sub-Saharan African soybean exports, and they help absorb any excess production.

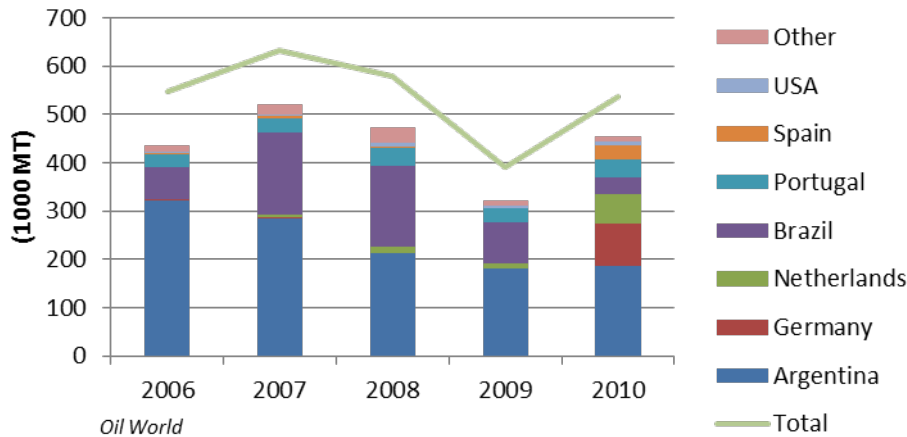
Sub-Saharan Soybean Meal Exports – Receiving Countries



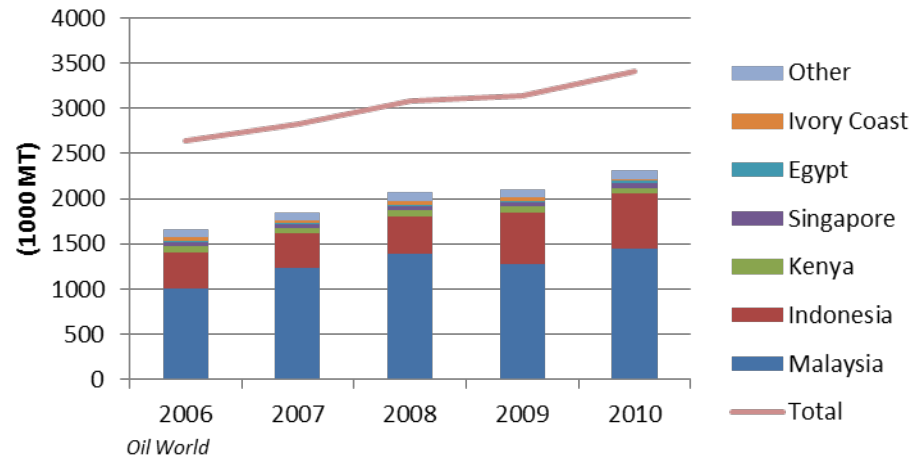
- Soybean meal exports originating in Sub-Saharan Africa tend to stay within the region. Demand for this value-added soy product is high and increasing.

Sub-Saharan African Trade Flows

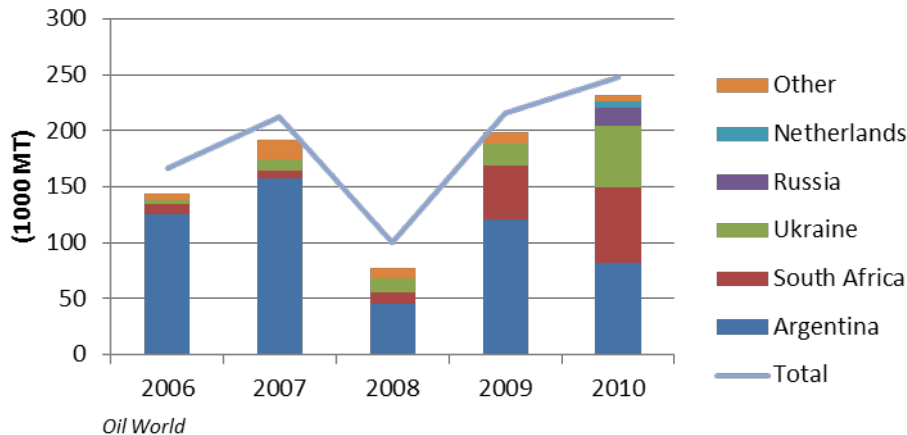
Soybean Oil Imports - Source Countries



Palm Oil Imports - Source Countries



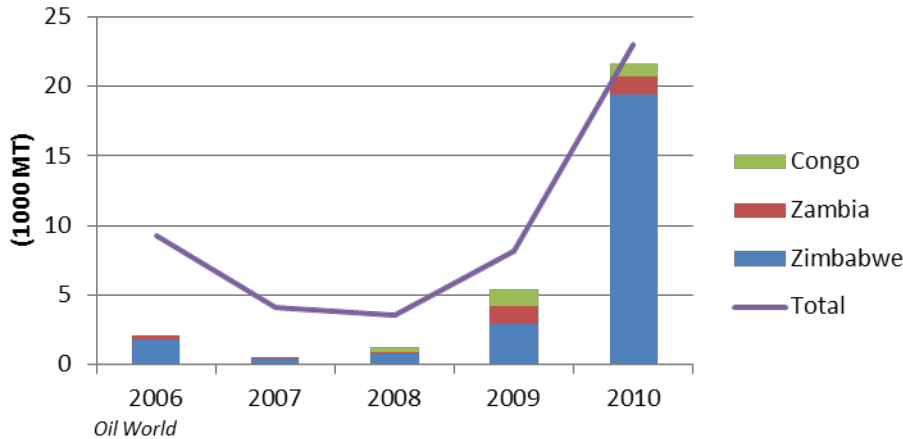
Sunflowerseed Oil Imports - Source Countries



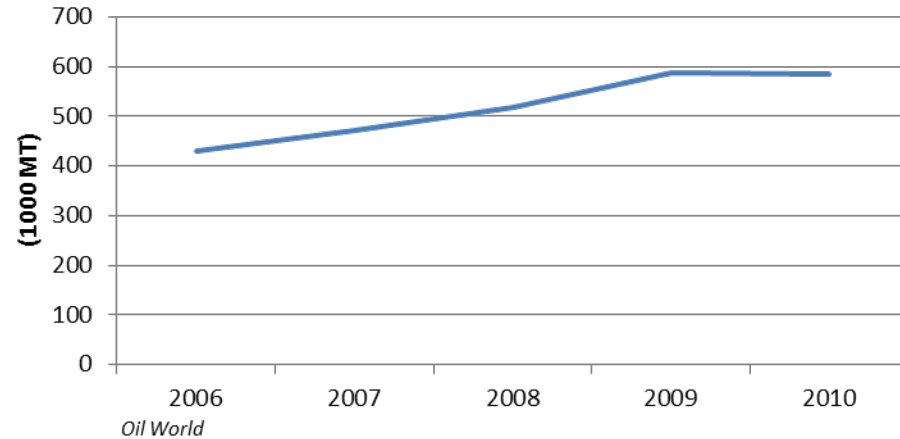
- 35% of 2010 soybean oil imports originated in Argentina.
- The US exported 8,600 MT of soybean oil to the region, accounting for less than 2% of total imports in 2010.
- A competing product, palm oil, is imported primarily from Malaysia and Indonesia.
 - More than 3.4 million MT of palm oil were imported in 2010.
- Similarly, sunflowerseed oil imports come from Argentina, and importantly from the regional powerhouse South Africa.
 - South Africa supplied nearly 70,000 MT sunflowerseed oil to other Sub-Saharan African countries in 2010.

Sub-Saharan African Vegetable Oil Exports

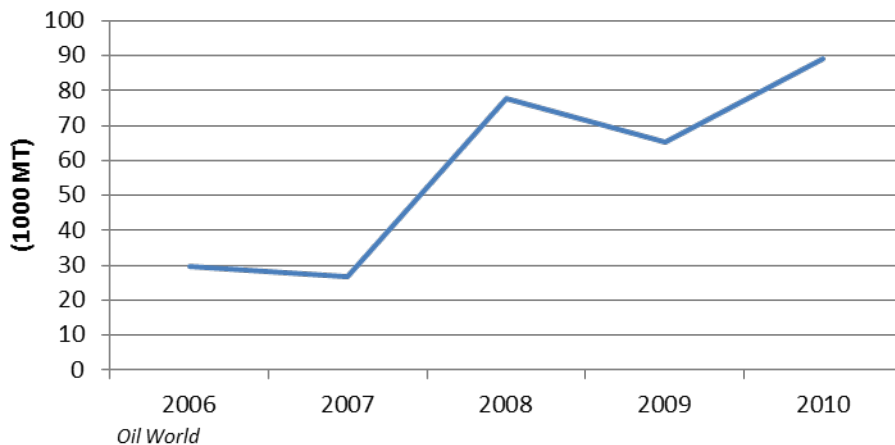
Soybean Oil Exports - Receiving Countries



Palm Oil Exports



Sunflowerseed Oil Exports



- Sub-Saharan Africa exports vegetable oils.
- Similar to soybean meal exports, Sub-Saharan African soybean oil exports tend to stay within the region, and in 2010 amounted to 23,000 MT.
- Other exported oils include sunflowerseed oil and palm oil.
 - Sunflowerseed oil exports originating in South Africa totaled 90,000 MT in 2010.
 - Palm oil dominated the vegetable oils export market, reaching more than 580,000 MT in 2010.

Sub-Regional Trade Flows

Although a more thorough analysis follows in the appendix, sub-regional trade flows are summarized below.

- **West Africa:**

- While the sub-region exported around 15,000 MT of soybean meal, West Africa also imported approximately 44,000 MT soybean meal.
- Importantly, the US already has a presence in the West African soybean oil market.
- In 2010, the US originated just over 6% of nearly 90,000 MT sub-regional soybean oil imports.

- **Southern Africa:**

- Collectively, these soybean production-belt countries are a net exporter of soybeans; however, the region is also a net importer of soybean meal.
- According to Oil World data, in 2010 almost all – 98% – of the roughly 960,000 MT imports went to South Africa.
- Soybean oil imports in Southern Africa were nearly 350,000 MT, with South Africa and Angola being major sub-regional importers.

- **East Africa:**

- While East African countries have some soybean exports, in 2010 the region was a net importer of 14,000 MT in 2010.
- Soybean meal import data is only available for Kenya, and these estimates vary. Meal imports are currently in excess of 20,000 MT.
- The sub-region has a larger market for soybean oil, and exporting countries – primarily Argentina and Portugal – sourced the region with approximately 110,000 MT.

Regional Trade Agreements

The African Union is a supranational organization that promotes the political and economic integration of 54 African member countries. The African Economic Community (AEC) spearheads the continent's economic cooperation and development efforts.

African Union (AU) Succeeds

Organization of African Unity (OAU)

- The OAU was established in 1963. Its Charter sets out objectives united in their goal of unifying the countries that comprise the African continent.
- At the inception of the OAU, unification entailed the eradication of colonialism.
- The OAU was criticized for playing a limited role in balancing socio-economic problems on the continent.
- In 1999, it was decided that the African Union would succeed the OAU, and the AU came into force in 2002. The formation of the AU and its objectives demonstrate an appreciation for the continent's evolving priorities – from liberation movements to economic integration.
- The AU must negotiate economic and political integration without threatening countries' sovereignty.

African Economic Community

- The African Economic Community (AEC) is an organization within the AU and promotes economic development and integration among the 54 member countries.
- During the time of the OAU, the Abuja Treaty was signed in 1991 and created the EAC. The AEC ambitiously aims to create an economic and monetary union among AU member countries by 2023.
- Regional trade agreements (RTAs) constitute the “pillars” of AEC, and these are perceived as the building blocks of continental integration.
- Pillars may have subgroups which include other alliances within these pillars (e.g. monetary and customs unions).
- Major pillars relevant to the focus countries of this study and recognized by the WTO include:
 - Common Market for Eastern and Southern Africa (COMESA)
 - East African Community (EAC)
 - Economic Community of West African States (ECOWAS)
 - Southern African Development Community (SADC)
- These RTAs are oftentimes overlapping, and countries belong to multiple RTAs, resulting in conflicting goals.

Is Regionalism Compatible with a Multilateral Trading System?

A number of Sub-Saharan African regional trade agreements (RTAs) promote intra-regional trade facilitating the movement of soy complex imports within the region. These RTAs share the goals of integration, adding value to production and exports, and employing collectivism as a competitive strategy.



ECOWAS



EAC



COMESA



SADC

Regional Trade Agreements

Economic Community of West African States (ECOWAS)

- ECOWAS was founded in 1975 and has 15 member countries, including Ghana, Nigeria, and Senegal.
- The bloc is governed by the ECOWAS Commission; additionally, the ECOWAS Bank for Investment acts as a regional holding company for public and private sector development. The Bank grants loans and guarantees for financing investment projects and programs with economic and social impacts in member states, especially those related to improving infrastructure.
- Additionally, ECOWAP is ECOWAS's regional agricultural policy program leading the region's attempts to increase production and expand intra-regional and extra-regional trade.

East African Community (EAC)

- The EAC was founded in 2000 and is headquartered in Arusha, Tanzania, the EAC includes Tanzania, Kenya, Uganda, Rwanda, and Burundi.
- The establishment of a Customs Union in 2005 added a common external tariff to EAC member countries. The 2010 creation of a Common Market was marked by free factor movement, including that of labor.
- In 2008, the US and EAC member countries signed a Trade and Investment Framework Agreement (TIFA) in an attempt to increase trade and improve the investment climate in the region.
- The Office of the United States Trade Representative reports that in 2009, 20% of the US's \$974 million in exports to the EAC were agricultural products.
- The EAC aims to help integrate East African countries by fostering value-added production, facilitating trade, promoting investments and improving competitiveness.
- While the future development of the EAC is uncertain, further integration of the EAC would entail the creation of a Monetary Union and, later, a Political Federation of member countries.

Regional Trade Agreements

Common Market for Eastern and Southern Africa (COMESA)

- COMESA was ratified in 1994, replacing a Preferential Trade Agreement (PTA) which came into effect in 1982.
- Today, COMESA includes 20 member countries, including Ethiopia, Kenya, Zambia, and Zimbabwe.
- COMESA's objective is to constitute a bloc that is able to maximize the region's collective competitiveness and promote economic growth through integration.
- At the time of COMESA's ratification, the public sector played a large role in business
- To date, more than half of COMESA countries have liberalized trade, have made efforts to eliminate customs tariffs and are working to diminish and eliminate non-tariff barriers among members.
- A Trade and Investment Framework Agreement (TIFA) between the US and COMESA was established in 2001, and USAID's East Africa office, and USAID-funded COMPETE, the Competitiveness and Trade Expansion Program, work to improve intra-regional trade and enable trade between the US and the region.
- While a customs union is planned, none exists yet.

Southern African Development Community (SADC)

- SADC was founded in 1992, following the 1980 formation of the Southern African Development Coordination Conference (SADCC).
- SADC has 15 member countries, including Angola, Mozambique, South Africa, Tanzania, Zambia, and Zimbabwe.
- One of the SADC's means of promoting cooperation and integration is the SADC Programme of Action. This program plays a key role in developing trade infrastructure in SADC member countries. Specifically, the program researches seed varieties to find crops suitable for growing in the SADC region.

African Free Trade Zone

African Free Trade Zone (AFTZ)

- In 2008, COMESA, EAC, and SADC announced their intention to merge and form an African Free Trade Zone (AFTZ). This tripartite agreement spans the length of the continent, and represents a step to realizing the continental economic union goal of the African Economic Community.
- As is the case with the aforementioned RTAs, threats to the AFTZ include Sub-Saharan African countries' protectionist tendencies, political instability, and an absence of diversification of production and exports.

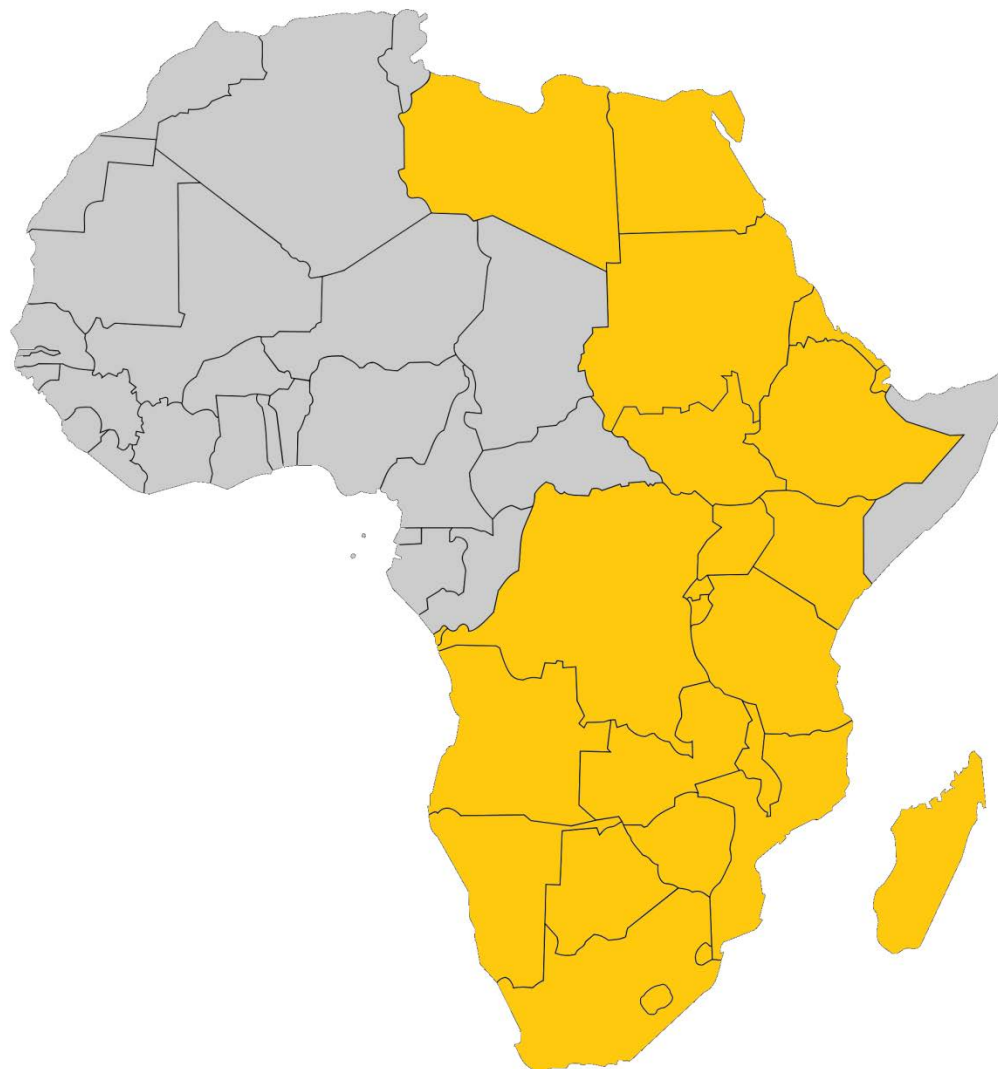


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Landed Price Analysis: Summary

- Outside of South Africa, regional ports are very congested and have limited capacity to handle bulk Panamax and Handymax vessels . Regional transportation infrastructure and loading and unloading capacity is very poor throughout the region.
 - Many US bulk shipments into the region must land in Europe or North Africa first before continuing to regional ports due to limited draughts and loading and unloading capacity at the ports.
 - It is cost prohibitive to ship US products directly to the region in coasters compared to Argentina and Brazil.
 - Land-locked countries prefer to consume local production and intraregional imports due to high transportation costs and customs duties.
 - Ports in most countries are undeveloped and congestion at the ports lead to delayed loading and unloading times.
- Tariff rates for soy complex imports are very high, especially in countries with expanding processing and production capacity
- The US is at an extreme disadvantage on bulk soy complex imports into the region
 - Argentina is the cheapest origin to the region due to its location.
- **However, container imports represent a real opportunity for the US in the region.**
 - The US has a considerable advantage over Argentina and Brazil on container imports into the region due to the high availability of containers in the US compared to its competitors.
 - The vast majority of ports in the region have the port capacity to unload container ships, but not bulk.

Landed Price Analysis: Overview and Methodology

An essential determinant of the competitiveness of US soybean complex exports in Sub-Saharan Africa is the landed price of soybeans, soybean meal, and soybean oil.

This landed price is comprised of several variables:

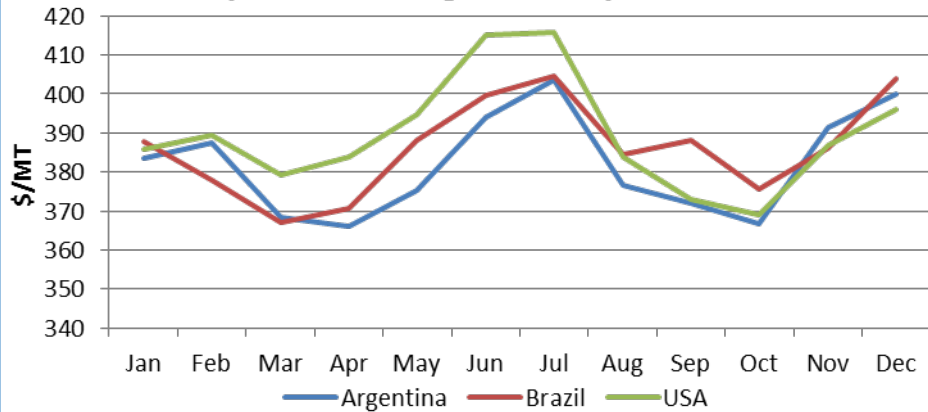
- The Free on Board (FOB) export price
- Transportation costs
- Ad valorem tariff paid upon arrival at the destination port

Evaluating competitiveness requires that the landed prices of US exports are not looked at in isolation: This study juxtaposes US landed prices with those of Argentine, Brazilian, and in the case of soybean meal, Indian imports, as well as Sub-Saharan African domestic production.

- Soybeans, soybean meal, and soybean oil landed prices are each considered in terms of export ports (US Gulf, Paranaguá, Brazil, Rosario, Argentina, and Mumbai, India) and destination ports and inland markets in Sub-Saharan Africa (West Africa, Southern Africa, and East Africa).
- FOB prices used from soybean complex export ports (expressed in \$/MT) are the yearly average FOB prices since 2007.
- The costs of transportation used are the regional average bulk freight rates from origination ports to receiving ports in West, Southern, and East Africa
- The tariff rate applied is the average of rates applied by major ports in the receiving regions (West, Southern, and East Africa).
- The resulting landed prices are expressed in terms of both bulk and containerized transport costs.
- Containerized costs assume shipment sizes of 5-15,000 MT due to port drafts.
- Given the calculated landed prices to major ports, the landed price to interior markets is calculated.
- These tables enable the immediate comparison of landed prices of the soybean complex from all of the origination ports.

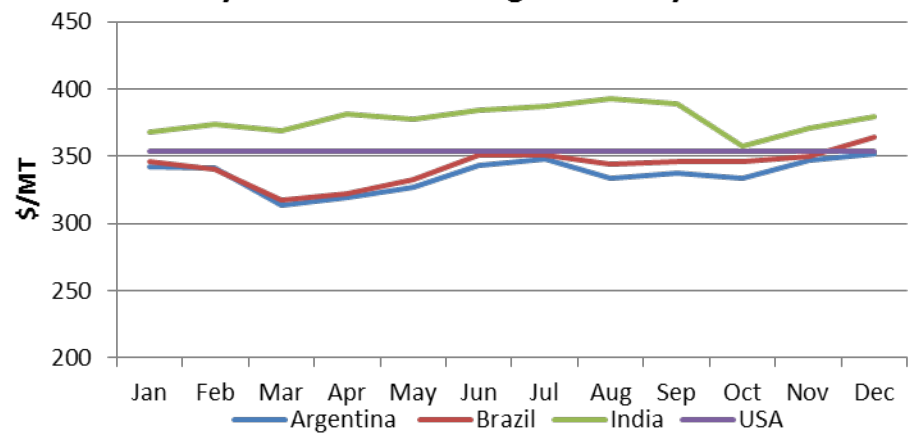
Competitiveness Can Vary By Season

Soybeans: Average Monthly FOB Prices



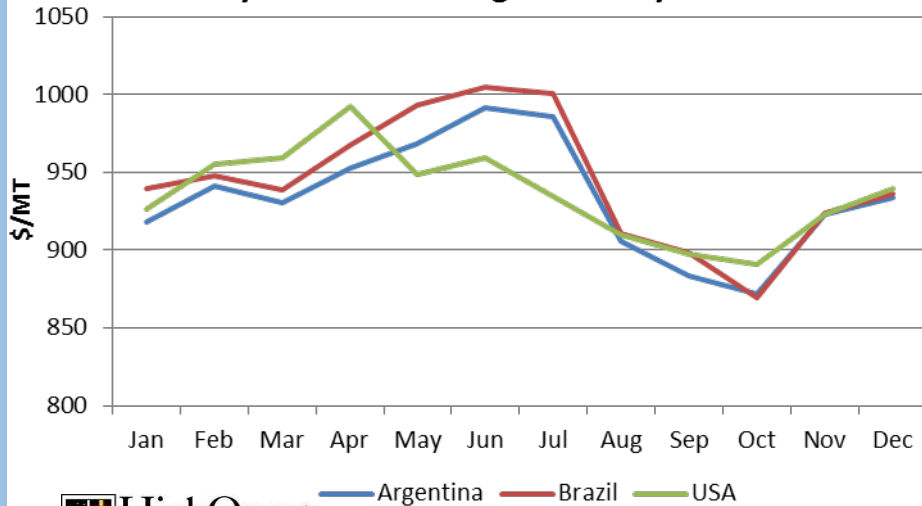
Oil World, ABIOVE, Bolsa de Cereales

Soybean Meal: Average Monthly FOB Prices



Oil World, FAPRI, ABIOVE, Bolsa de Cereales

Soybean Oil: Average Monthly FOB Prices

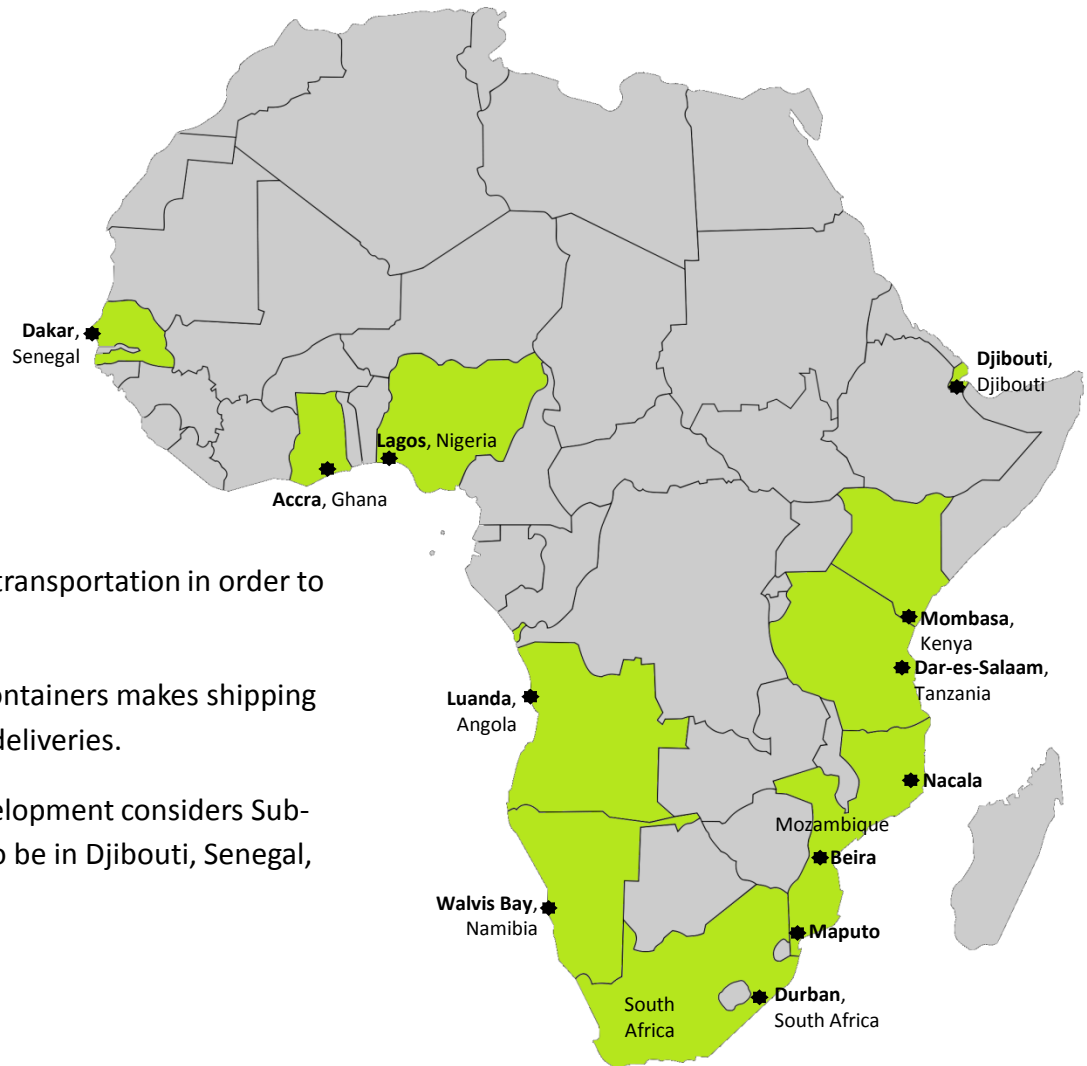


Oil World, ABIOVE, Bolsa de Cereales

- In order to account for potential seasonal variations in competitiveness, these figures demonstrate the variability of FOB prices and, subsequently, the variability of overall landed prices. Different months could mean different originating ports and countries have competitive advantages.

Regional Ports and Port Infrastructure

- The quality of Sub-Saharan African port infrastructure impacts the efficiency and competitiveness of trade with the US.
- The included map shows the ports included in the landed price analysis for soybean exports to the region.
- Smaller ports in Sub-Saharan Africa may not be directly serviced by US shippers. In this case, transloading may be the only way for soy complex imports to reach these ports.
- Transloading entails the use of multiple means of transportation in order to transport goods to a final destination.
- Transloading of materials shipped in bulk and in containers makes shipping slower and more expensive than direct shipment deliveries.
- The United Nations Conference on Trade and Development considers Sub-Saharan Africa's primary transshipment facilities to be in Djibouti, Senegal, and South Africa.



Regional Port Conditions Impact Exports' Competitiveness

Liner Shipper Connectivity Index



- The Liner Shipping Connectivity Index (LSCI) is a metric of a country's integration in the global shipping network. A higher score indicates a better ability to receive US soybean complex and other imports, increasing the competitiveness of those imports.
- The LSCI is considered for the countries with primary ports servicing the sample of countries in this study.
- South Africa is the clear leader in this index, followed by Djibouti serving East Africa and Nigeria and Ghana, both in West Africa. Of the sample countries, Mozambique consistently scores the lowest.

Lead Time to Import, Median Days

Country	Lead Time to Import (Days)
Angola	8
Ghana	6.8
Kenya	5.9
Namibia	3
Nigeria	4.1
Senegal	2.7
South Africa	3.3
Tanzania	7.1

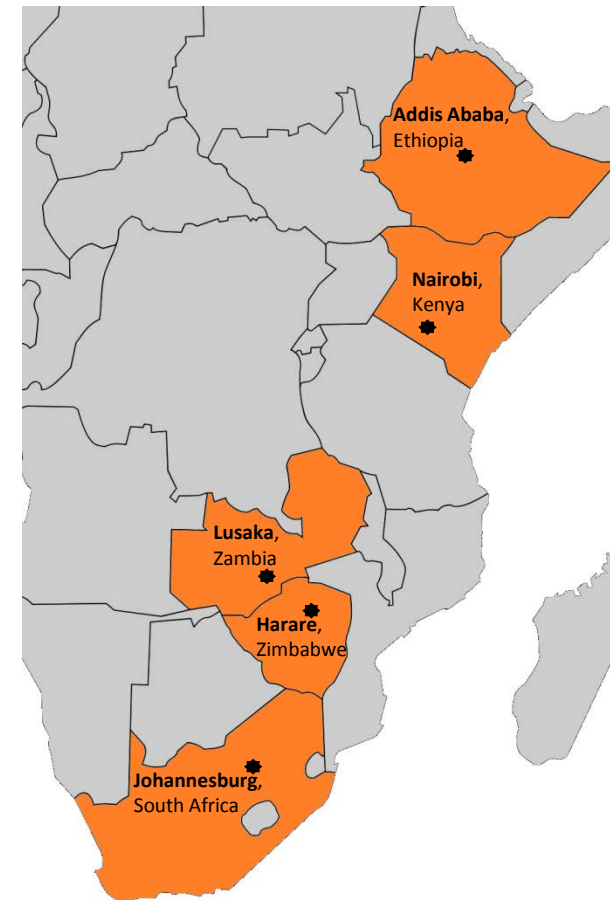
World Bank World Development Indicators

- World Bank data from 2009 measures the median days from port to consignee.
- There is much variation in Sub-Saharan African port countries: due to traffic in congested ports, Angola leads the region, with a median of 9 days. Senegal's median lead time to import is the shortest, at 2.7 days.

Landlocked Countries and Interior Markets

- Improvements to port services in Sub-Saharan Africa would benefit not only countries with ports, but also landlocked countries and interior markets.
- Landlocked countries (Zambia and Zimbabwe from this study's sample) must rely on the ports and inland transportation systems of neighboring countries.
- Inefficiencies caused by ports hurt the competitiveness of US and other countries' exports to the region by increasing goods' landed price.
- Regional Trade Agreements (RTAs) facilitating intraregional trade help make importation and exportation processes more efficient.
- Further intraregional harmonization of trade policies and transportation infrastructure development between landlocked and port countries will improve trade in the region.

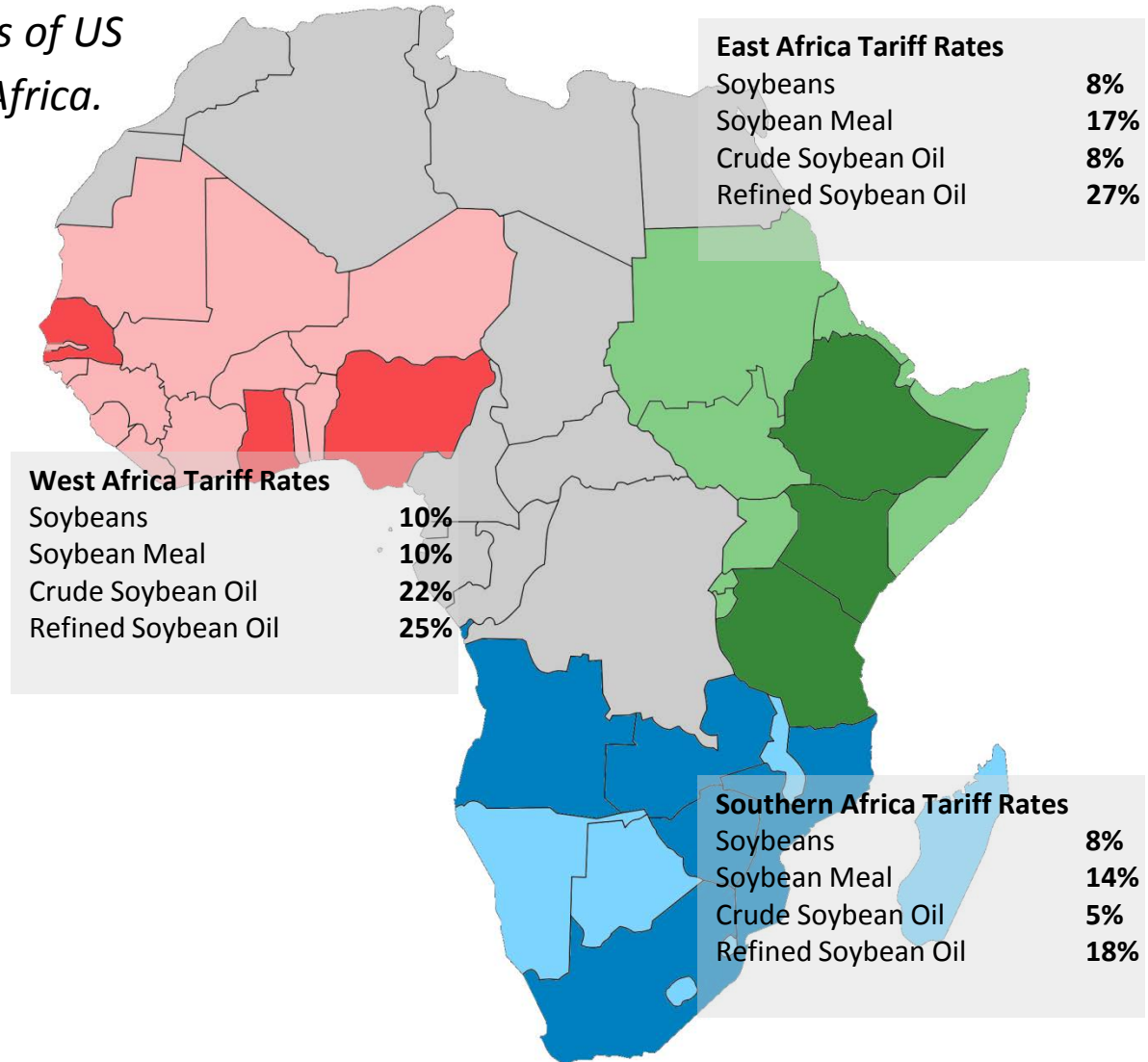
Interior Markets



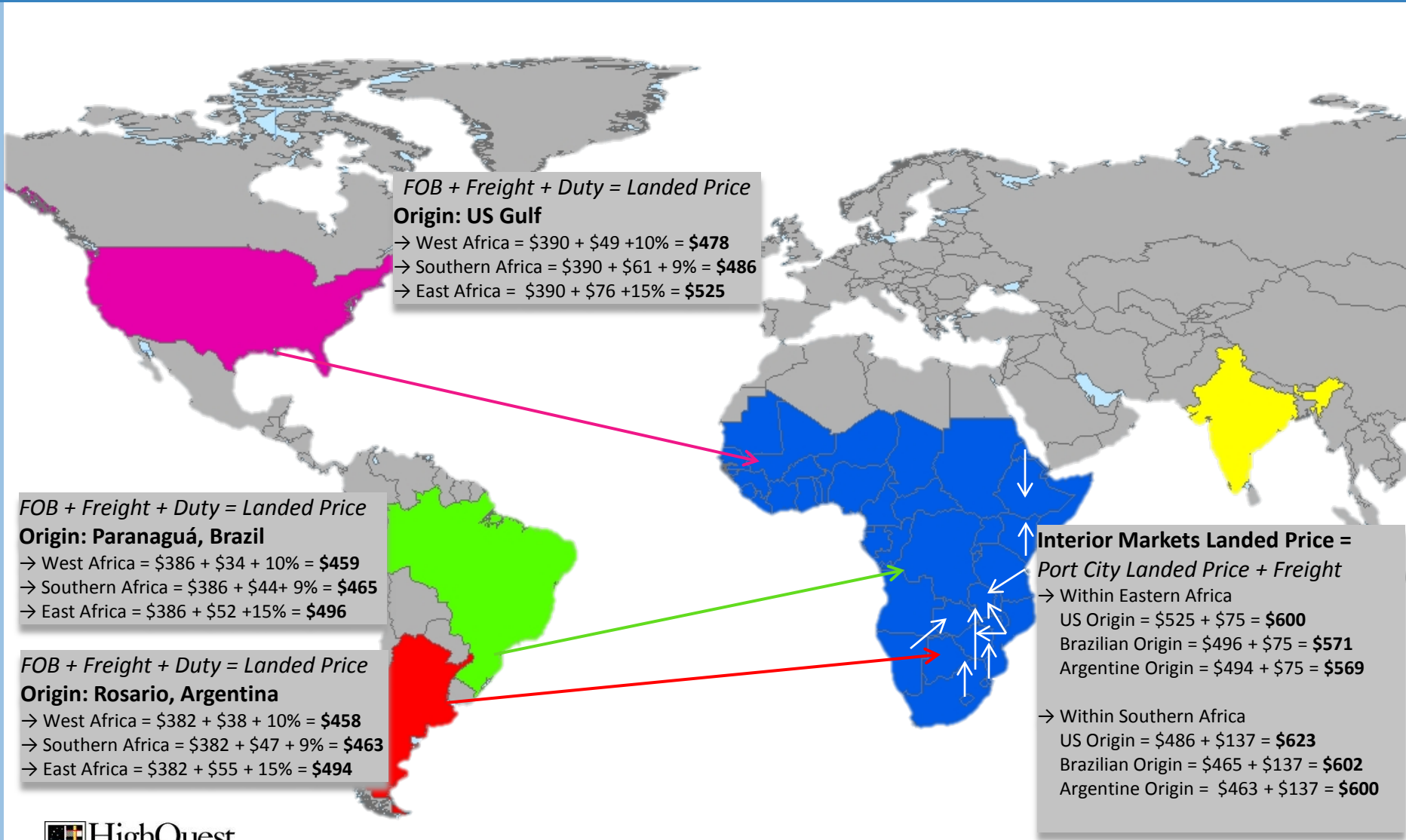
Tariff Rates

Tariffs impact the competitiveness of US soybean exports in Sub-Saharan Africa.

- The World Trade Organization (WTO) reports customs duties on imports among WTO members.
- Tariff data from the selected countries reveal regional variations in tariffs, which contribute to varying levels of competitiveness for US soybean complex exports.
- Notwithstanding regional variations, tariff rates show value-added soy products are subject to higher duties.
- Soybean Complex tariff rates are generally lowest for sample countries in Southern Africa.



Soybeans: Regional Landed Price Analysis



Landed Prices: Bulk Soybeans

Bulk (\$/MT)		Cost Differential between US and Other Markets			
Port/City	Country	US Landed Price	\$US - \$ARG	\$US - \$BRA	
West	Dakar	Senegal	\$472.93	\$17.51	\$17.30
	Accra	Ghana	\$479.93	\$23.51	\$23.30
	Lagos	Nigeria	\$479.93	\$15.51	\$15.30
Southern	Luanda	Angola	\$452.74	\$11.89	\$13.98
	Walvis Bay	Namibia	\$477.63	\$16.85	\$16.72
	Durban	South Africa	\$479.13	\$21.35	\$19.22
	Maputo	Mozambique	\$495.83	\$25.59	\$23.34
	Nacala	Mozambique	\$503.83	\$31.59	\$30.84
	Beira	Mozambique	\$495.83	\$25.59	\$23.34
East	Dar-Es-Salaam	Tanzania	\$507.93	\$37.51	\$38.30
	Mombasa	Kenya	\$507.93	\$37.51	\$34.30
	Djibouti	Djibouti	\$561.32	\$14.75	\$11.92

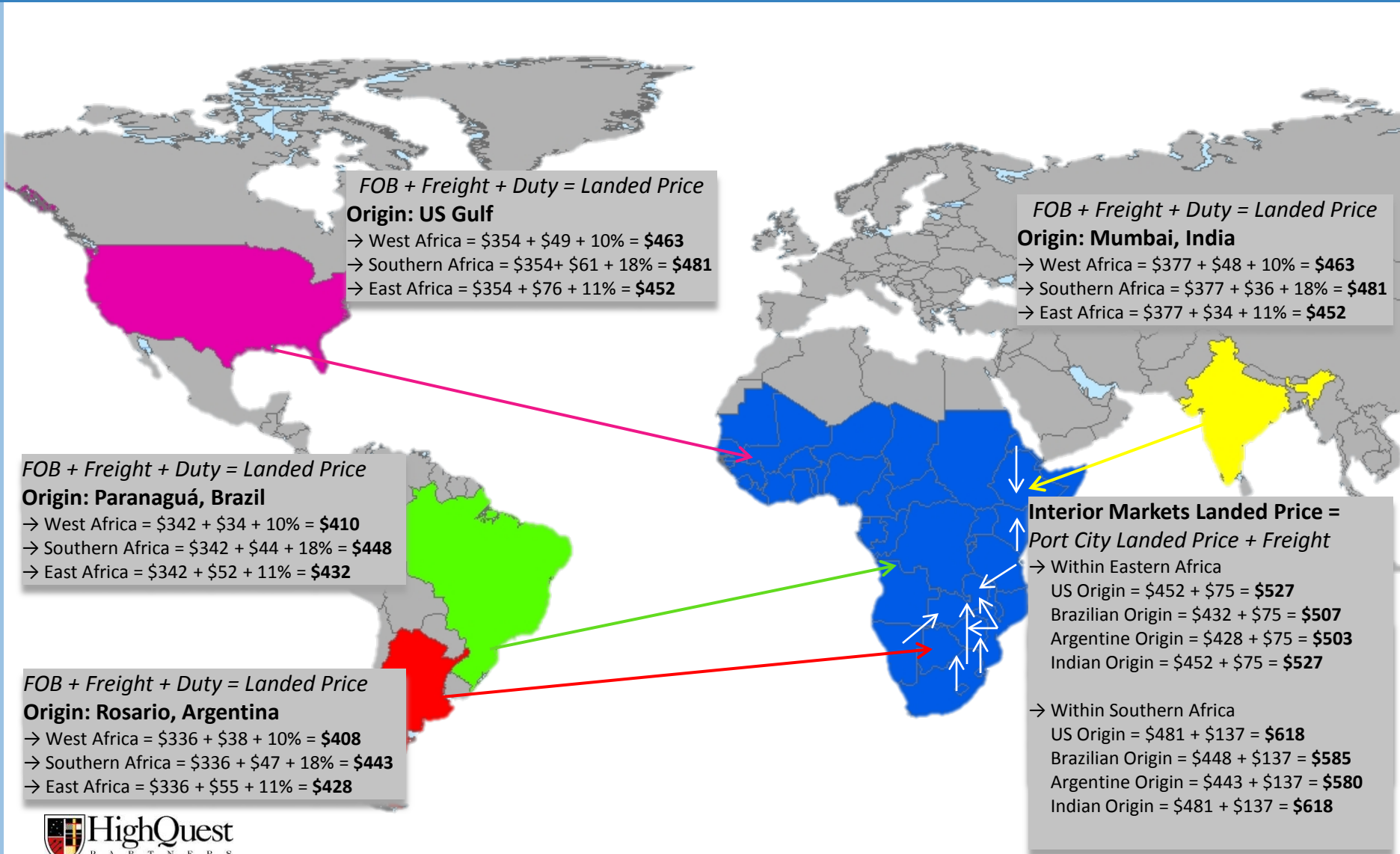
Bulk (\$/MT)								
	Destination City	Destination Country	Originating Port	Distance (KM)	Transport Cost	US Landed Price	\$US - \$ARG	\$US - \$BRA
East	Addis Ababa	Ethiopia	Djibouti, DJ	800	110	\$671.32	\$14.75	\$11.92
	Nairobi	Kenya	Mombasa, KE	500	40	\$547.93	\$37.51	\$34.30
Southern	Lusaka	Zambia	Dar-es-Salaam, TZ	2000	160	\$667.93	\$37.51	\$38.30
	Lusaka	Zambia	Beira, MZ	1000	100	\$595.83	\$25.59	\$23.34
	Lusaka	Zambia	Durban, SA	2300	230	\$709.13	\$21.35	\$19.22
	Lusaka	Zambia	Walvisbay, NA	1900	200	\$677.63	\$16.85	\$16.72
	Johannesburg	South Africa	Durban, SA	600	50	\$529.13	\$21.35	\$19.22
	Harare	Zimbabwe	Durban, SA	1800	160	\$639.13	\$21.35	\$19.22
	Harare	Zimbabwe	Beira, MZ	500	60	\$555.83	\$25.59	\$23.34

Landed Prices: Containerized Soybeans

Containerized (\$/MT)		Cost Differential between US and Other Markets			
	Port/City	Country	US Landed Price	\$US - \$ARG	\$US - \$BRA
West	Dakar	Senegal	\$691.97		
	Accra	Ghana	\$672.41	-\$48.01	-\$69.61
	Lagos	Nigeria	\$672.41	-\$54.53	-\$47.87
Southern	Luanda	Angola	\$736.87	\$55.72	\$71.37
	Walvis Bay	Namibia	\$740.70		
	Durban	South Africa	\$721.13		\$199.87
	Maputo	Mozambique	\$817.61		\$184.77
	Nacala	Mozambique			
	Beira	Mozambique	\$817.61		
East	Dar-Es-Salaam	Tanzania			
	Mombasa	Kenya			
	Djibouti	Djibouti	\$763.06	-\$68.51	-\$38.56

Containerized (\$/MT)								
	Destination City	Destination Country	Originating Port	Distance (KM)	Transport Cost	US Landed Price	\$US - \$ARG	\$US - \$BRA
East	Addis Ababa	Ethiopia	Djibouti, DJ	800	110	\$873.06	-\$68.51	-\$38.56
	Nairobi	Kenya	Mombasa, KE	500	40			
Southern	Lusaka	Zambia	Dar-es-Salaam, TZ	2000	160			
	Lusaka	Zambia	Beira, MZ	1000	100	\$917.61		
	Lusaka	Zambia	Durban, SA	2300	230	\$951.13		\$199.87
	Lusaka	Zambia	Walvisbay, NA	1900	200	\$940.70		
	Johannesburg	South Africa	Durban, SA	600	50	\$771.13		\$199.87
	Harare	Zimbabwe	Durban, SA	1800	160	\$881.13		\$199.87
	Harare	Zimbabwe	Beira, MZ	500	60	\$877.61		

Soybean Meal: Regional Landed Price Analysis



Landed Prices: Bulk Soybean Meal

Bulk (\$/MT)		Cost Differential between US and Other Markets				
	Port	Country	US Landed Price	\$US - \$ARG	\$US - \$BRA	\$US-IND
West	Dakar	Senegal	\$432.85	\$28.28	\$25.84	-\$31.99
	Accra	Ghana	\$439.85	\$34.28	\$31.84	-\$21.99
	Lagos	Nigeria	\$439.85	\$26.28	\$23.84	-\$20.99
Southern	Luanda	Angola	\$426.18	\$22.40	\$22.26	-\$10.81
	Walvis Bay	Namibia	\$480.70	\$29.53	\$26.51	-\$10.86
	Durban	South Africa	\$482.20	\$34.03	\$29.01	-\$1.36
	Maputo	Mozambique	\$487.20	\$38.03	\$33.01	-\$0.36
	Nacala	Mozambique	\$495.20	\$44.03	\$40.51	\$7.64
	Beira	Mozambique	\$487.20	\$38.03	\$33.01	-\$0.36
East	Dar-Es-Salaam	Tanzania	\$467.85	\$48.28	\$46.84	\$17.01
	Mombasa	Kenya	\$467.85	\$48.28	\$42.84	\$14.01
	Djibouti	Djibouti	\$469.46	\$24.81	\$20.19	\$15.30

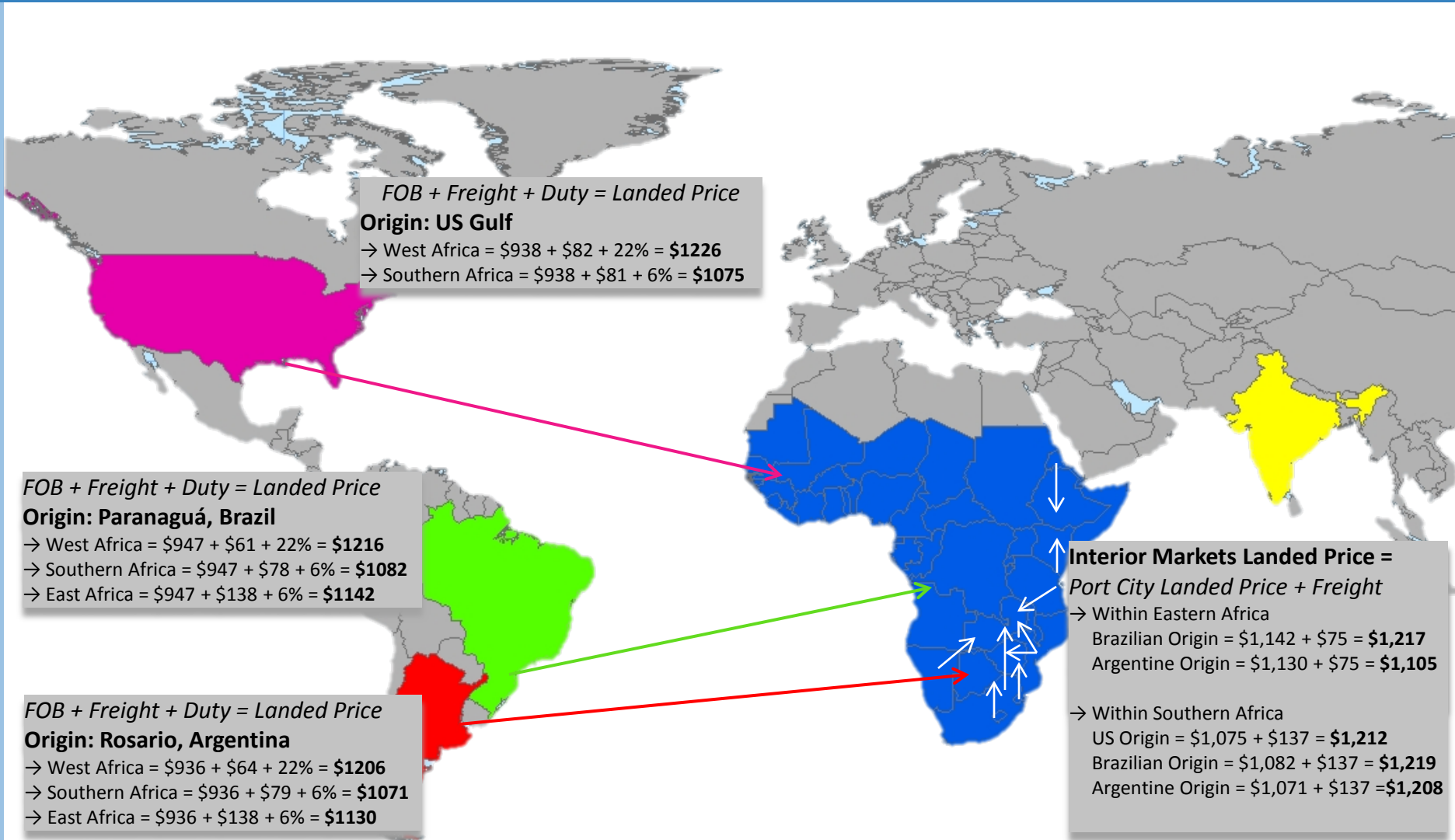
Bulk (\$/MT)		Transport								
	Destination City	Destination Country	Originating Port	Distance (KM)	Cost	US Landed Price	\$US - \$ARG	\$US - \$BRA	\$US-\$IND	
East	Addis Ababa	Ethiopia	Djibouti, DJ	800	110	\$579.46	\$24.81	\$20.19	\$15.30	
	Nairobi	Kenya	Mombasa, KE	500	40	\$507.85	\$48.28	\$42.84	\$14.01	
Southern	Lusaka	Zambia	Dar-es-Salaam, TZ	2000	160	\$627.85	\$48.28	\$46.84	\$17.01	
	Lusaka	Zambia	Beira, MZ	1000	100	\$587.20	\$38.03	\$33.01	-\$0.36	
	Lusaka	Zambia	Durban, SA	2300	230	\$712.20	\$34.03	\$29.01	-\$1.36	
	Lusaka	Zambia	Walvisbay, NA	1900	200	\$680.70	\$29.53	\$26.51	-\$10.86	
	Johannesburg	South Africa	Durban, SA	600	50	\$532.20	\$34.03	\$29.01	-\$1.36	
	Harare	Zimbabwe	Durban, SA	1800	160	\$642.20	\$34.03	\$29.01	-\$1.36	
	Harare	Zimbabwe	Beira, MZ	500	60	\$547.20	\$38.03	\$33.01	-\$0.36	

Landed Prices: Containerized Soybean Meal

Containerized (\$/MT)		Cost Differential between US and Other Markets				
	Port	Country	US Landed Price	\$US - \$ARG	\$US - \$BRA	\$US-IND
West	Dakar	Senegal	\$651.89			\$63.14
	Accra	Ghana	\$632.33	-\$37.24	-\$61.07	\$41.40
	Lagos	Nigeria	\$632.33	-\$43.76	-\$39.33	\$32.71
Southern	Luanda	Angola	\$710.31	\$66.23	\$79.65	\$53.45
	Walvis Bay	Namibia	\$743.77			\$96.64
	Durban	South Africa	\$724.20		\$209.66	\$143.38
	Maputo	Mozambique	\$808.98		\$194.44	\$158.59
	Nacala	Mozambique				
	Beira	Mozambique	\$808.98			\$158.59
East	Dar-Es-Salaam	Tanzania				
	Mombasa	Kenya				
	Djibouti	Djibouti	\$671.20	-\$58.45	-\$30.29	\$132.00

Containerized (\$/MT)		Transport							
	Destination City	Destination Country	Originating Port	Distance (KM)	Cost	US Landed Price	\$US - \$ARG	\$US - \$BRA	\$US-\$IND
East	Addis Ababa	Ethiopia	Djibouti, DJ	800	110	\$781.20	\$226.55	-\$30.29	\$132.00
	Nairobi	Kenya	Mombasa, KE	500	40				
Southern	Lusaka	Zambia	Dar-es-Salaam, TZ	2000	160				
	Lusaka	Zambia	Beira, MZ	1000	100	\$908.98			\$158.59
	Lusaka	Zambia	Durban, SA	2300	230	\$954.20		\$209.66	\$143.38
	Lusaka	Zambia	Walvisbay, NA	1900	200	\$943.77			\$96.64
	Johannesburg	South Africa	Durban, SA	600	50	\$774.20		\$209.66	\$143.38
	Harare	Zimbabwe	Durban, SA	1800	160	\$884.20		\$209.66	\$143.38
	Harare	Zimbabwe	Beira, MZ	500	60	\$868.98			\$158.59

Soybean Oil: Regional Landed Price Analysis



Landed Prices: Soybean Oil

Bulk Rate (\$/MT)		Cost Differential between US and Other Markets			
	Port	Country	US Landed Price	\$US - ARG	\$US - BRA
West	Dakar	Senegal	\$1,097.03	\$5.68	-\$1.82
	Accra	Ghana	\$1,215.85	\$25.83	\$15.74
	Lagos	Nigeria	\$1,356.59	\$26.06	\$14.33
Southern	Luanda	Angola	\$1,074.50	\$23.62	\$15.05
	Walvis Bay	Namibia	\$1,112.03	\$27.68	\$17.68
	Durban	South Africa	\$1,113.53	\$38.18	\$29.18
	Maputo	Mozambique			
	Nacala	Mozambique			
	Beira	Mozambique			
East	Dar-Es-Salaam	Tanzania			
	Mombasa	Kenya			
	Djibouti	Djibouti			

Bulk Rate (\$/MT)								
	Destination City	Destination Country	Originating Port	Distance (KM)	Transport Cost	US Landed Price	\$US - \$ARG	\$US - \$BRA
East	Addis Ababa	Ethiopia	Djibouti, DJ	800	110			
	Nairobi	Kenya	Mombasa, KE	500	40			
Southern	Lusaka	Zambia	Dar-es-Salaam, TZ	2000	160			
	Lusaka	Zambia	Beira, MZ	1000	100			
	Lusaka	Zambia	Durban, SA	2300	230	\$1,343.53	\$38.18	\$29.18
	Lusaka	Zambia	Walvis Bay, NA	1900	200	\$1,312.03	\$27.68	\$17.68
	Johannesburg	South Africa	Durban, SA	600	50	\$1,163.53	\$38.18	\$29.18
	Harare	Zimbabwe	Durban, SA	1800	160	\$1,273.53	\$38.18	\$29.18
	Harare	Zimbabwe	Beira, MZ	500	60			

Results: Landed Price Analysis

- After aggregating the US's and other exporters' free on board (FOB) export prices, transportation costs, and ad valorem tariffs paid upon arrival at the destination port, the resulting landed price reveals originating countries enjoy different levels of competitiveness in different regions of Sub-Saharan Africa.
- Soybean meal and soybean oil imports are most in demand:
 - Bulk soybean meal exports to Sub-Saharan Africa:
 - To West African ports, US per metric ton meal prices are roughly \$50 more than Argentine and Brazilian landed prices, on average.
 - To West Africa, India is not a competitor; due to distance, its exports are not price competitive.
 - To Southern Africa ports, US per metric ton meal prices are about \$30 more than Argentine and Brazilian landed prices.
 - To East Africa ports, it seems India's landed prices make the country's meal exports cost prohibitive. However, East Africa is a largely non-GMO importing region and India is the primary supplier of non-GMO soybean meal in the region.
 - For interior markets, countries' export prices vary across a spectrum of \$30, but Argentina's price is always the most competitive.
 - Bulk soybean oil exports to Sub-Saharan Africa:
 - The US is price competitive on soybean oil exports to West Africa, especially to Senegal, where the average difference between Brazilian and Argentine competitors is minimal.
 - To Southern African ports, US landed soybean oil exports are within \$15-\$38 of meeting the average lower prices of Argentine and Brazilian exports.
 - For interior markets, landed price disparities mirror those for Southern African ports.

Intraregional Suppliers and Prices

- With expanding soybean production and processing capacity in the region, especially in Southern Africa, Sub-Saharan African countries will be better poised to meet the soybean complex demands of Sub-Saharan African countries.
- In order to be competitive with imports, prices for Sub-Saharan African soy complex production are going to have to decline to a level where they are at parity with import prices. Potential ways that Sub-Saharan African countries can lower their soy complex prices include:
 - Reduction or elimination of intraregional customs duties;
 - Transportation infrastructure improvements;
 - Increasing supply as well as crushing infrastructure with the region and
 - Placing higher tariffs on the prices of soy complex imports.
- It is essential to consider current domestic soybean prices in countries with substantial production:

Country	Domestic Price	US Price	Argentina Price	Brazil Price
South Africa	\$520/MT	\$479.13/MT	\$457.78/MT	\$459.91/MT
Nigeria	\$670/MT	\$479.93/MT	\$464.42/MT	\$464.63/MT
Zambia	\$450/MT	\$595.83/MT	\$570.24/MT	\$572.49/MT
Mozambique	\$685/MT	\$495.83/MT	\$470.24/MT	\$472.49/MT

- Currently, Zambia is the only major soybean producing country in Sub-Saharan Africa where local production is priced below imports.
 - This is largely due to the cost of moving soybeans from the ports to Zambia and the fact that Zambia has a relatively strong domestic crushing industry.

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- **Public Policies**
- Conclusions – SWOT Analyses

Public Policy: Summary

- A primary concern for US exporters is the non-GMO stance of most Sub-Saharan African countries.
 - Only South Africa accepts GMO imports in the region, although recently Kenya has decided to import GMO corn due to food shortages in the country.
 - The real questions are how restrictive these non-GMO policies really are and if importers are consciously circumventing these policies, i.e. how strong are labeling and testing programs in Sub-Saharan Africa and are they being monitored.
 - The non-GMO soybean policies could have a positive impact on US non-GMO soybean imports in the future, especially as Sub-Saharan African consumers continue to rely on soybeans as a source of human nutrition and if the US can develop a container non-GMO soybean program to meet this pent-up demand.
- The GSM-102 program could represent a real opportunity for US exporters in Sub-Saharan Africa as there is a severe lack of credit throughout the region. No other competitor offers such a program, although most exporters do offer lines of credit to Sub-Saharan African buyers.
 - Of the countries selected, currently, Ghana, Kenya, Nigeria, Senegal and South Africa are eligible for the GSM-102 program, but aside from South Africa, the other countries are considered very high risk. Angola, Ethiopia, Mozambique, Tanzania, Zambia and Zimbabwe are not eligible for the program.

Supranational Stances on GMO Public Policy

The WTO's Agreement on Sanitary and Phytosanitary Measures

- The agreement has the goal of ensuring the safety of the food supply.
- An equally important goal is to ensure regulations are not superfluous and do not belie countries' protectionist objectives.
- The agreement emphasizes that regulations must be justified by science.

Cartagena Protocol on Biosafety to the Convention on Biological Diversity

- The Protocol has been in effect since the 2003 Convention on Biological Diversity.
- The stated objective is to protect biological diversity.
- The Protocol is in favor of letting countries determine their own restrictions.
 - This stance is supported by two mechanisms:
 - An Advanced Informed Agreement lets countries take time to become familiarized with available research and assess opportunities and risks.
 - The Precautionary Principle helps protect countries decisions.
- The US has not ratified the Protocol.
- The agreements are potentially mutually exclusive, and clearly impact the international trade of the soy complex.

Established GMO Acceptance: The Case of South Africa

Timeline: GMO crops in South Africa

- 1978: South Africa began considering biotechnology an important part of the country's future, and the South African Committee for Genetic Experimentation was founded to serve the government, sciences, and industry.
- 1990s: GM crops were released in South Africa, and field trials began.
- 2001: South Africa released its National Biotechnology Strategy, a plan designed to stimulate growth in the area by encouraging private sector research and development as well as by promoting more competitive crop production.

Background

- The South African government recognized the potential of GMO crops to lower production costs, increase yields and assist growers in becoming more efficient and productive.
- South Africa balances the US's and EU's drastically different regulatory approaches to biotechnology.

Domestic Policy and Trade

- The United States and Argentina are South Africa's most important partners for GM trade.
- Europe, however, is the country's most significant partner overall.
- The fact that almost all Sub-Saharan African countries restrict GMO imports may shape the future of South Africa's biotechnology policies.
 - Proponents of more restrictive biotechnology policies in South Africa worry that the country may lose access to export markets.
 - However, organizations including USAID and AfricaBIO promote biotechnology as an important tool for growth.

Expanding GMO Acceptance: Food Shortages Permit GM Maize Imports in Kenya

- In July 2011, Kenya became the fourth African country to permit GM commodity imports by allowing the importation of GMO maize.
 - This policy change stems from an attempt to mitigate the country's food shortage.
 - The change has been met with fierce opposition, and members of Parliament argue GM commodities are unfit for human consumption.
 - The country will allow the importation of GMO maize by millers to be processed for flour.
- To prevent infiltration of the food supply, GMO maize must be milled at the point of importation.
- Although labeling of product as GMO is required, concerns have been raised over the Kenyan government's ability to regulate these imports, including testing and labeling.

GSM-102: Overview

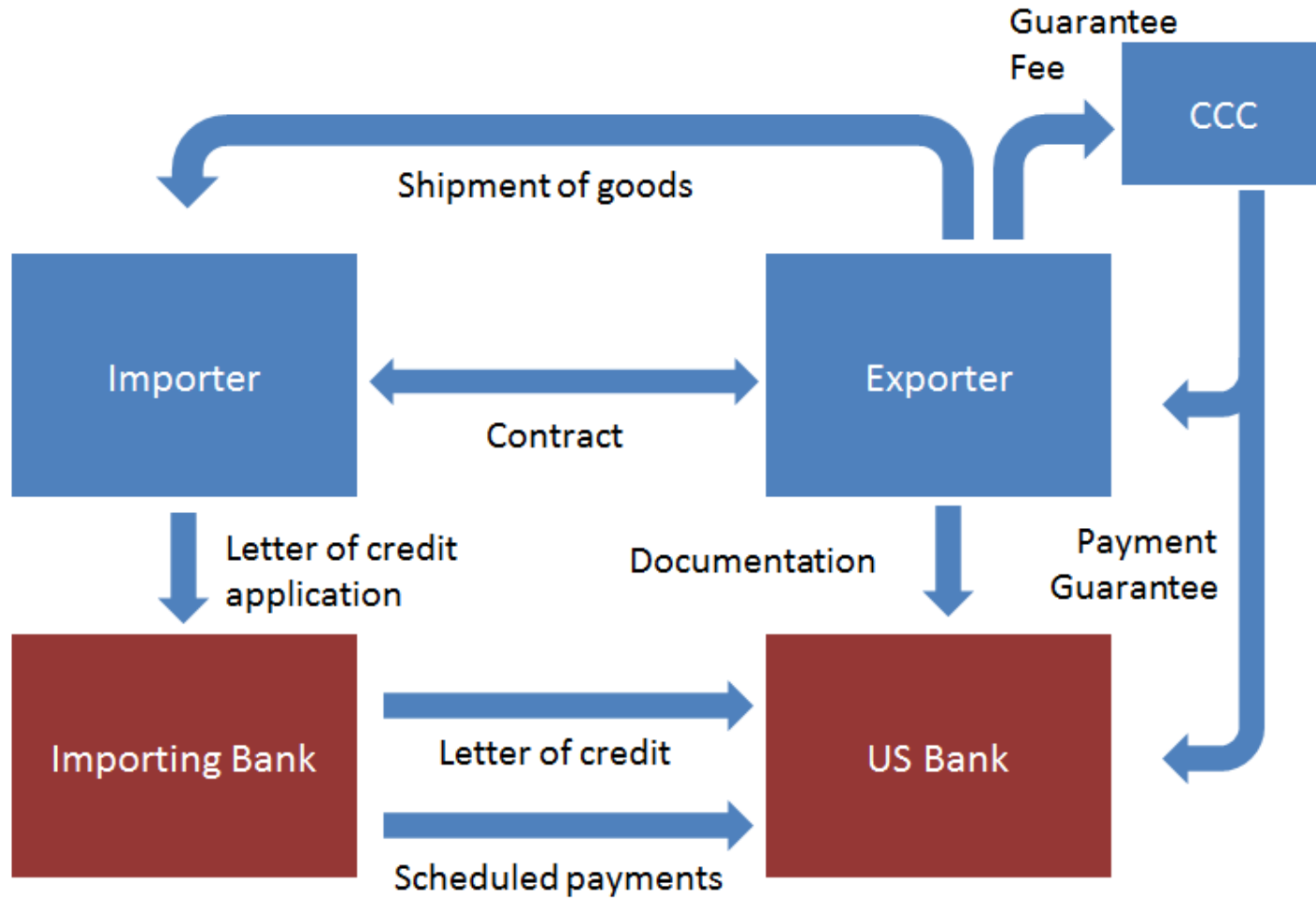
- GSM-102 is the USDA's Export Credit Guarantee Program, and connects importers with credit in order to promote and facilitate the export of US agricultural products.
 - The program reduces financial risk to lenders abroad – primarily in developing countries.
 - GSM-102 guarantees credit extended by US banks to foreign banks.
 - 98% of the principal and some of the interest are covered.
 - Since payment is ensured, competitive terms of credit can be offered.
 - US exporters pay a fee based on the risk of the country as well as the amount of their guarantee
 - Soybeans, Soybean Meal, and Soybean Oil are all GSM-102 eligible commodities.
- Several Sub-Saharan African countries have been deemed eligible for participation in the GSM-102 program.
 - Ghana, Kenya, Mozambique, Nigeria, Senegal, and South Africa are among these countries.
 - With the exception of South Africa (Country Risk Category 2), these countries fall under the highest risk category, 6.
- At this time, Angola, Ethiopia, Tanzania, Zambia, and Zimbabwe are not eligible.
- While the program is administered by the USDA's Foreign Agricultural Service (FAS), the Commodity Credit Corporation (CCC) issues credit in this export guarantee program.
 - The CCC has been a part of the USDA since 1939.
 - The CCC is intended to assist agricultural commodity producers through loans, purchases, and payments.
 - Thus, the CCC facilitates production and domestic and international marketing of agricultural commodities.

GSM-102: Transactions

In 2011, the USDA initiated efforts to clarify the process of exporting via the GSM-102 program and hopes it will become more attractive to and utilized by smaller-scale US exporters.

1. First, both the US exporter and the foreign importer must qualify for participation in the GSM-102 program.
2. Once a sale is confirmed between the importer and exporter, the exporter pays a guarantee fee (ad valorem and based on the country's risk) and the CCC issues a guarantee to the exporter.
3. The importer seeks a line of credit, and once this is established, the exporter assigns a guarantee to a US bank.
4. Once confirmation of the shipment and arrival of the export is received, the exporter is paid by the US bank, and the US bank arranges the terms of a loan to the foreign bank.
 - Foreign banks must be approved by the CCC
5. The importer establishes a repayment schedule with the foreign bank.
6. In the case of default by the foreign bank, the CCC covers any loss the US bank incurs.

GSM-102: Illustrated Transactions



Adapted from USDA FAS

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Conclusions: SWOT – US Soybean Complex Export to South Africa

Strengths

- Existing, established soy complex demand
- GMO imports are accepted
- Viewed as the most stable country in the region
- Ports are the largest in Africa, in terms of total cargo volume and container traffic
- The presence of commercial farmers has led to an efficient market for soy complex products
- Exports are eligible for the USDA's Export Guarantee Program

Weaknesses

- Established, significant trade relationship with Argentina
- Domestic production is projected to increase, which may diminish need for imports
- US price competitiveness is weaker when compared to Argentina and Brazil

Opportunities

- Accredited GSM-102 participant and lowest risk country in Sub-Saharan Africa
- Large container market
- Increasing GDP per capita leads to expanding demand for soy products
- Demand exceeds supply for soy products

Threats

- Ability of Argentina to continue its dominance over the South African soybean complex import market
- Brazil or India's ability to gain shares of the country's import market
- Continued growth in soybean production and processing capacity reduces the need for imports
- Increased imports from Zambia

Conclusions: SWOT – US Soybean Complex Exports to West Africa

Strengths

- The US enjoys an already-established trade relationship with West Africa
- West African countries in the sample are eligible for the USDA's Export Guarantee Program
- The US is already exporting soybean oil to the region
- More competitive pricing for US products
- Increased cooperative public/private relationships
- ECOWAS regional trade agreement facilitates movement of goods to other countries in the sub-region

Weaknesses

- Small-scale farming operations not efficient for developing a market for soybeans
- Oil economies lacking diversification
- Difficult business environment
- Corruption
- Investment Risk
- Port congestion delays exports in reaching their destinations
- Argentina is already poised as a competitor
- Limited processing capabilities
- Domestic production

Opportunities

- Growing populations
- Rising incomes
- Increasing commercialization in livestock sectors
- Need for increased processing capacity to satiate increasing demand

Threats

- Future political unrest
- Continued infrastructural weaknesses
- Ability of Argentina and Brazil to increase their exports to the sub-region
- Expansion of soybean processing capacity met by domestic production

Conclusions: SWOT – US Soybean Complex Exports to Southern Africa

Strengths

- Demand for the soybean complex is already established
- Soybean meal is already commonly included in poultry feed
- The USDA's Export Guarantee Program is available for Mozambique
- SADC and COMESA regional trade agreements connect member countries across sub-regions
- Some countries have productive commercial farming sectors

Weaknesses

- Major soybean growing region in Sub-Saharan Africa that prefers local production over imports.
- Angola, Zambia, and Zimbabwe are not eligible for the USDA's Export Guarantee Program
- Limited port infrastructure
- Smallholders dominate production landscape but there are large-scale commercial farms
- GMO restrictions
- Logistical problems complicate exports to some landlocked countries (including Zambia and Zimbabwe)
- Net exporter of soybeans and soybean meal

Opportunities

- There will be increasing domestic demand for the soy complex:
 - Poultry production and consumption is expected to increase dramatically
 - Projected GDP growth means more people will be consuming proteins
- Government support programs are interested in bettering infrastructures related to agriculture
- Processing capacity is projected to increase
- Establishment of African Free Trade Zone

Threats

- Dramatic increases to domestic production in the future could minimize need for imports
- Demand subject to volatile poultry industry
- Foreign investment is developing land for domestic soy production
- Future political unrest

Conclusions: SWOT – US Soybean Complex Exports to East Africa

Strengths

- Demand for soybeans for livestock feed is increasing
- Agriculture is the primary employer in the sub-region.
- Kenya is eligible for the USDA's Export Guarantee Program
- Strong, existing demand for edible oils
- EAC, COMESA, and SADC regional trade agreements facilitate trade between member-countries
- Kenya starting to accept GMO products

Weaknesses

- Distance to East African markets from US makes it difficult for US to compete there
- Existing consumer skepticism for soy as a food product
- Capital, transport, communications, energy infrastructure is inadequate
- Tanzania and Ethiopia are not eligible for the USDA's Export Guarantee Program
- GMO is generally restricted, in spite of recent, limited acceptance

Opportunities

- Emergency needs for food have opened the door for soy to be an alternative protein source
- Population is growing and will have increasing food demands
- Agricultural sector and investment in agriculture is growing
- Foreign investment in East Africa promises to develop soybean processing infrastructure
- Establishment of African Free Trade Zone
- Acceptance of GMO food products in Kenya allows US to compete with India

Threats

- Continued or increased competition from India
- Unappealing foreign direct investment (FDI) environment is likely to persist
- Chronic infrastructure inadequacies
- Future political unrest



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Market Potential of Sub-Saharan Africa: Appendices

Prepared for the United States Soybean Export Council

December 19, 2011

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- Selection Matrix: Variables Explained
- Selection Matrix: Results
- Country-Level Data and Analyses
- Sub-Regional Trade Flows

Selection Matrix: Variables Explained

Soybean Complex

- It is assumed that historical production of soybeans, as well historical imports of soybeans, soybean meal, and soybean oil, comprises a good indicator of potential imports.
- Sub-Saharan African countries currently importing the soy complex have established demand for the soy complex.
- The ranking is derived from the USDA's Foreign Agricultural Service's Production, Supply and Distribution (PSD) database as well as the UN's FAOSTAT Food Balance Sheets.
- This value is given the priority of 25% of a country's overall score, specifically distributed with 10% of the score attributed to soybean production and 15% to soybean complex imports.

Population

- To identify the overall population, a UN Population Prospects total (urban and rural) populations in the year 2020 is used.
- Urbanization is calculated using the CAGR of urban population growth between 2000 and 2025 projections.
 - The selection of this variable aims to examine the causal relationship between urbanization and soybean imports.
 - It is assumed that more populous and urbanized countries will demand more soybean complex imports in the future.
- Total population is given a weight of 10%, while urbanization is given a weight in the total score of 5%.

Selection Matrix: Variables Explained

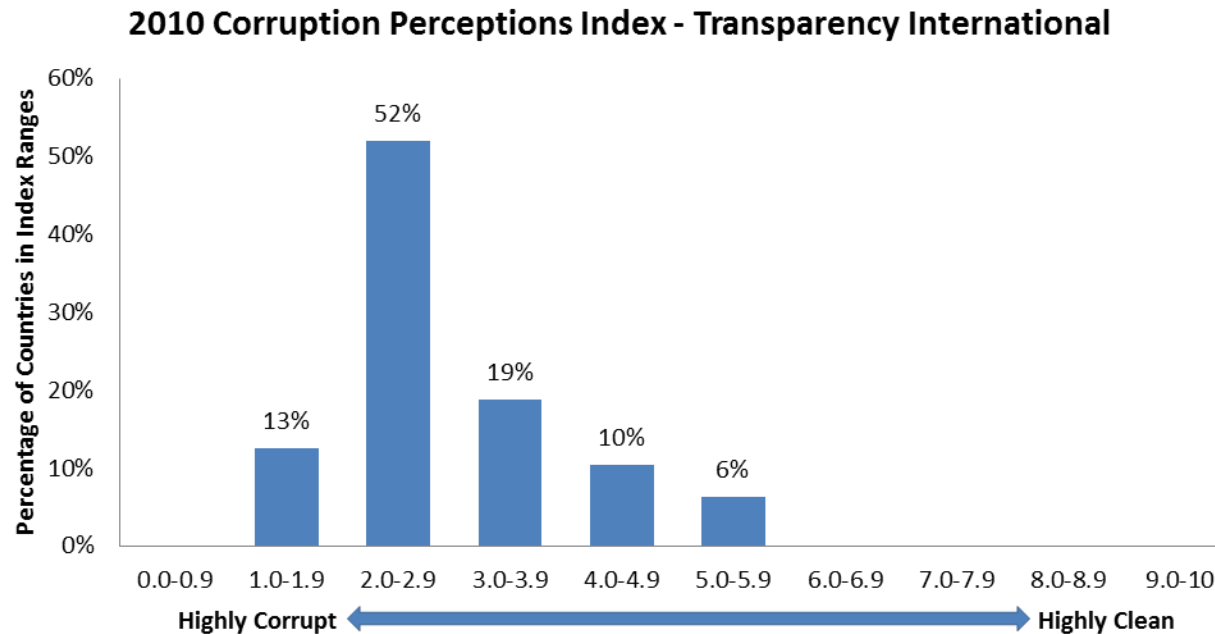
Consumption

- Protein consumption is an aggregate of beef, pork, poultry, and fish.
 - The variable relies on USDA and FAO data sources.
- Vegetable oils consumption is an aggregate of soybean oil, palm oil, peanut oil, sunflowerseed oil, and cottonseed oil.
 - The variable relies on USDA data sources.
 - These are competing oils, for which soybean oil can be considered a substitute.
- Protein and vegetable oil consumption is given a composite value of 15%.

Business

- We used the World Bank's Doing Business Index: It averages measures of business regulatory and operation environments across 9 categories including access to credit and property rights.
 - This broad measure explains 10% of a country's total score.
- Transparency International's Corruption Perceptions Index is a measure of perceived corruption in countries' public sectors, and we include it under the assumption that it is more difficult to operate in corrupt countries
 - TI defines corruption as the abuse of power for private gain.
 - It ranks countries on a scale from 0 to 10, with a lower score indicating a higher degree of corruption. This index aggregates incidence of bribery of public officials, embezzlement of public funds, and other measures of public sector integrity.
 - This index accounts for 5% of a country's total score.

Selection Matrix: Variables Explained



- The above figure illustrates Sub-Saharan African countries' distribution from highly corrupt to highly clean countries in terms of the 2010 Corruption Perceptions Index.
- The majority of countries in the region fall into the more corrupt end of the spectrum, and a small percentage in the middle.

Selection Matrix: Variables Explained

Trade

- US Exports:
 - This variable employs 2010 data from the US Department of Commerce's International Trade Administration.
 - Sub-Saharan African countries are ranked by the total value of US exports landing in those countries.
 - Countries with significant US exports are assumed to already have a strong trade relationship with the US; furthermore, it suggests logistical networks to supply these countries with goods originating in the US are already established.
 - This variable explains 10% of countries' overall scores.
- Logistics Performance Index
 - Based on a scale of 1 to 5, this index is released by the World Bank, and scores from 2010 are used.
 - The Index aggregates 6 measures, including the efficiency of border control and customs agencies, the available infrastructure related to trade and transportation, the ease of arranging competitively priced shipments, the dexterity of customs officers and transportation authorities, and ease of tracking shipments, and deviations from anticipated arrival times.
 - This variable comprises 5% of a country's overall score.
- Import Costs
 - This variable uses World Bank, World Development Indicators data to rank countries by the average fees a 20-foot container accrues.
 - These fees include costs associated with documentation, administrative matters, customs broker fees, port handling, and inland transportation.
 - Understandably, costs are especially high for landlocked countries.
 - This variable comprises 10% of the country's overall score.

Selection Matrix: Variables Explained

GMO Status

- Given US GM soybean production, it is considered an asset for a country to accept GMO imports.
- The GMO question is treated as a binary variable.
- While a top score is awarded to countries accepting GMO imports, other countries receive no credit.
- There are just 3 Sub-Saharan African countries allowing GMO imports: South Africa, Burkina Faso, and Kenya.
 - Although Kenya has not yet permitted imports of the GM soybean complex, its acceptance of other GMO food products suggest less restrictive policies may follow.
- GMO status is given a 5% weight of the total score.

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Selection Matrix: Results

Coefficient (overall) by variable	SOY		POPULATION				CONSUMPTION			BUSINESS			TRADE			OTHER	TOTAL	RANK	COUNTRIES BY RANK										
	Production	Imports	Total Pop	Urbanization	Protein	Veg Oils	Ease	Corruption	US Exports	Logistics	Import costs	GMO status	0.05	1															
	0.25	0.1	0.15	0.1	0.05	0.15	0.075	0.1	0.05	0.1	0.05	0.1	0.05	0.1	0.05														
Angola	0	0	46	6.9	36	3.6	34	1.7	45	3.375	37	2.775	17	1.7	6	0.3	46	4.6	14	0.7	17	3.7	0	0	25.65	South Africa	40.125		
Benin	39	3.9	23	3.45	23	2.3	35	1.75	30	2.25	30	2.25	12	1.2	30	1.5	43	4.3	44	2.2	37	1.1	0	0	0	0	25.1	Kenya	35.275
Botswana	0	0	21	3.15	12	1.2	8	0.4	14	1.05	13	0.975	46	4.6	48	2.4	18	1.8	21	1.05	11	0.8	0	0	0	0	16.625	Nigeria	35.275
Burkina Faso	38	3.8	10	1.5	33	3.3	48	2.4	27	2.025	28	2.1	27	2.7	34	1.7	17	1.7	13	0.65	8	0.7	48	2.4	0	0	24.275	Tanzania	32.15
Burundi	30	3	0	0	22	2.2	46	2.3	12	0.9	32	2.4	4	0.4	4	0.2	10	1	19	0.95	7	2.2	0	0	0	0	13.35	Uganda	30.625
Cameroon	40	4	31	4.65	35	3.5	20	1	37	2.775	41	3.075	14	1.4	15	0.75	32	3.2	34	1.7	22	4.2	0	0	0	0	26.05	Ethiopia	30.45
Cape Verde	0	0	29	4.35	3	0.3	9	0.45	6	0.45	5	0.375	34	3.4	46	2.3	6	0.6	0	0	42	0.4	0	0	0	0	12.225	Ghana	28.25
Central African Republic	0	0	8	1.2	18	1.8	10	0.5	19	1.425	21	1.575	3	0.3	13	0.65	7	0.7	0	0	4	0.2	0	0	0	0	8.15	Senegal	26.625
Chad	0	0	0	0	27	2.7	41	2.05	28	2.1	26	1.95	2	0.2	3	0.15	25	2.5	31	1.55	2	4.1	0	0	0	0	13.2	Zambia	26.2
Comoros	0	0	7	1.05	4	0.4	12	0.6	9	0.675	6	0.45	19	1.9	12	0.6	1	0.1	27	1.35	41	0.9	0	0	0	0	7.125	Cameroon	26.05
Congo DR	41	4.1	14	2.1	46	4.6	38	1.9	42	3.15	45	3.375	10	1	8	0.4	26	2.6	42	2.1	9	0.3	0	0	0	0	25.325	Malawi	25.975
Congo R	0	0	36	5.4	16	1.6	13	0.65	25	1.875	20	1.5	8	0.8	9	0.45	40	4	29	1.45	3	1.8	0	0	0	0	17.725	Angola	25.65
Côte d'Ivoire	31	3.1	17	2.55	38	3.8	24	1.2	36	2.7	43	3.225	13	1.3	14	0.7	34	3.4	32	1.6	18	4.5	0	0	0	0	23.575	Mozambique	25.475
Djibouti	0	0	15	2.25	6	0.6	6	0.3	5	0.375	17	1.275	20	2	37	1.85	31	3.1	23	1.15	45	3.6	0	0	0	0	12.9	Congo DR	25.325
Equatorial Guinea	0	0	0	0	5	0.5	17	0.85	0	0	4	0.3	16	1.6	5	0.25	41	4.1	0	0	36	3	0	0	0	0	7.6	Madagascar	25.275
Eritrea	0	0	26	3.9	19	1.9	45	2.25	10	0.75	3	0.225	5	0.5	24	1.2	4	0.4	7	0.35	30	1.4	0	0	0	0	11.475	Benin	25.1
Ethiopia	37	3.7	34	5.1	47	4.7	27	1.35	38	2.85	24	1.8	39	3.9	28	1.4	44	4.4	25	1.25	14	2.3	0	0	0	0	30.45	Zimbabwe	24.95
Gabon	34	3.4	18	2.7	9	0.9	7	0.35	23	1.725	12	0.9	22	2.2	29	1.45	39	3.9	24	1.2	23	4.3	0	0	0	0	18.725	Burkina Faso	24.275
Gambia	0	0	30	4.5	11	1.1	33	1.65	15	1.125	19	1.425	28	2.8	35	1.75	12	1.2	30	1.5	43	4	0	0	0	0	17.05	Côte d'Ivoire	23.575
Ghana	0	0	28	4.2	40	4	21	1.05	46	3.45	42	3.15	44	4.4	42	2.1	45	4.5	28	1.4	40	3.8	0	0	0	0	28.25	Rwanda	22.2
Guinea	0	0	35	5.25	26	2.6	31	1.55	26	1.95	38	2.85	6	0.6	7	0.35	24	2.4	39	1.95	38	2	0	0	0	0	19.5	Sudan	21.225
Guinea-Bissau	0	0	25	3.75	10	1	15	0.75	4	0.3	11	0.825	9	0.9	11	0.55	5	0.5	11	0.55	20	2.1	0	0	0	0	9.125	Liberia	20.9
Kenya	33	3.3	42	6.3	43	4.3	36	1.8	43	3.225	46	3.45	40	4	10	0.5	42	4.2	36	1.8	21	2.9	48	2.4	0	0	35.275	Mali	20.775
Lesotho	0	0	0	0	13	1.3	22	1.1	7	0.525	2	0.15	31	3.1	40	2	9	0.9	20	1	29	3.9	0	0	0	0	10.075	Niger	20.4
Liberia	36	3.6	16	2.4	17	1.7	26	1.3	11	0.825	29	2.175	23	2.3	38	1.9	36	3.6	22	1.1	39	3.1	0	0	0	0	20.9	Mauritius	19.825
Madagascar	0	0	44	6.6	37	3.7	30	1.5	35	2.625	22	1.65	30	3	23	1.15	30	3	41	2.05	31	1.9	0	0	0	0	25.275	Guinea	19.5
Malawi	43	4.3	33	4.95	32	3.2	47	2.35	20	1.5	23	1.725	33	3.3	39	1.95	14	1.4	26	1.3	19	1.3	0	0	0	0	25.975	Gabon	18.725
Mali	35	3.5	9	1.35	30	3	39	1.95	34	2.55	31	2.325	25	2.5	27	1.35	15	1.5	15	0.75	13	3.2	0	0	0	0	20.775	Congo R	17.725
Mauritania	0	0	39	5.85	15	1.5	5	0.25	22	1.65	16	1.2	15	1.5	16	0.8	23	2.3	40	2	32	4.7	0	0	0	0	17.05	Togo	17.125
Mauritius	0	0	41	6.15	7	0.7	1	0.05	17	1.275	10	0.75	48	4.8	47	2.35	16	1.6	43	2.15	47	3.4	0	0	0	0	19.825	Gambia	17.05
Mozambique	0	0	40	6	39	3.9	37	1.85	21	1.575	34	2.55	36	3.6	26	1.3	38	3.8	18	0.9	34	2.6	0	0	0	0	25.475	Mauritania	17.05
Namibia	0	0	0	0	14	1.4	19	0.95	31	2.325	15	1.125	43	4.3	43	2.15	28	2.8	9	0.45	26	1	0	0	0	0	15.5	Botswana	16.625
Niger	0	0	32	4.8	34	3.4	42	2.1	33	2.475	25	1.875	11	1.1	22	1.1	19	1.9	33	1.65	10	3.5	0	0	0	0	20.4	Sierra Leone	16.275
Nigeria	48	4.8	45	6.75	48	4.8	23	1.15	47	3.525	48	3.6	32	3.2	20	1	47	4.7	35	1.75	35	0.6	0	0	0	0	35.275	Namibia	15.5
Rwanda	42	4.2	22	3.3	25	2.5	44	2.2	8	0.6	14	1.05	45	4.5	41	2.05	13	1.3	10	0.5	6	4.8	0	0	0	0	22.2	Burundi	13.35
Sao Tome and Principe	0	0	13	1.95	2	0.2	14	0.7	3	0.225	7	0.525	7	0.7	33	1.65	2	0.2	47	2.35	48	2.4	0	0	0	0	8.5	Chad	13.2
Senegal	0	0	47	7.05	29	2.9	18	0.9	39	2.925	36	2.7	26	2.6	31	1.55	37	3.7	46	2.3	24	4.6	0	0	0	0	26.625	Djibouti	12.9
Seychelles	0	0	20	3	1	0.1	2	0.1	16	1.2	8	0.6	41	4.1	45	2.25	8	0.8	0	0	46	2.8	0	0	0	0	12.15	Cape Verde	12.225
Sierra Leone	0	0	19	2.85	20	2	25	1.25	24	1.8	27	2.025	29	2.9	19	0.95	21	2.1	8	0.4	28	0	0	0	0	0	16.275	Seychelles	12.15
Somalia	0	0	0	0	24	2.4	32	1.6	0	0	1	0.075	0	0	1	0.05	3	0.3	6	0.3	0	2.7	0	0	0	0	4.725	Eritrea	11.475
South Africa	47	4.7	48	7.2	44	4.4	4	0.2	48	3.6	47	3.525	40	3	44	2.2	48	4.8	48	2.4	27	1.6	48	2.4	0	0	40.125	Swaziland	10.95
Sudan	0	0	24	3.6	41	4.1	29	1.45	41	3.075	40	3	24	2.4	2	0.1	29	2.9	12	0.6	16	2.5	0	0	0	0	21.225	Lesotho	10.075
Swaziland	0	0	11	1.65	8	0.8	3	0.15	13	0.975	9	0.675	38	3.8	36	1.8	11	1.1	0	0	25	3.3	0	0	0	0	10.95	Guinea-Bissau	9.125
Tanzania	32	3.2	38	5.7	45	4.5	40	2	44	3.3	44	3.3	35	3.5	25	1.25	35	3.5	38	1.9	33	4.4	0	0	0	0	32.15	Sao Tome and Principe	8.5
Togo	0	0	12	1.8	21	2.1	28	1.4	18	1.35	35	2.625	18	1.8	18	0.9	33	3.3	37	1.85	44	1.5	0	0	0	0	17.125	Central African Republic	8.15
Uganda	46	4.6	27	4.05	42	4.2	43	2.15	40	3	39	2.925	37	3.7	21	1.05	27	2.7	45	2.25	15	1.2	0	0	0	0	30.625	Equatorial Guinea	7.6
Zambia	44	4.4	37	5.55	31	3.1	16	0.8	32	2.4	18	1.35	42	4.2	32	1.6	20	2	16	0.8	12	0.5	0	0	0	0	26.2	Comoros	7.125
Zimbabwe	45	4.5	43	6.45	28	2.8	11	0.55	29	2.175	33	2.475	21	2.1	17	0.85	22	2.2	17	0.85	5	0	0	0	0	0	24.95	Somalia	4.725

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South Africa

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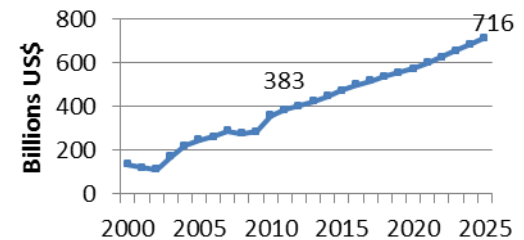
South Africa: Political Climate, Economic and International Affairs

- President Jacob Zuma represents the African National Congress (ANC).
- The ANC is supported by the Congress of South African Trade Unions (COSATU) and the South African Communist Party (SACP) – the three groups comprise a tripartite alliance.
- Currently tensions exist between members of the alliance as COSATU and SACP members demand more of a voice in influencing policies under an ANC administration.
- In general, the South African government is making an overt push to fight corruption.
- South Africa is currently a temporary member of the United Nations Security Council, a status it shares with Nigeria and Gabon.
- Although South Africa will continue to enjoy good relations with the US, it is also true that South Africa will try to strengthen relations with other developing countries, including Brazil.
- South Africa is coming out of a recession, with GDP and the public and private sectors projected to experience growth.
- Growth in the immediate future could be limited by internal disparities and infrastructure inadequacies.
 - Income disparities, unemployment, limited access to services, and land reform disputes have led to unrest and protests.
- Infrastructure and human capital development may be aided by the recently established National Planning Commission and the Department for Economic Development.
- The Economist Intelligence Unit expects agricultural production to grow at an average rate of 3.5% through 2015.



Economist Intelligence Unit

South Africa: Historical and Projected GDP



IMF World Economic Outlook, Economist Intelligence Unit

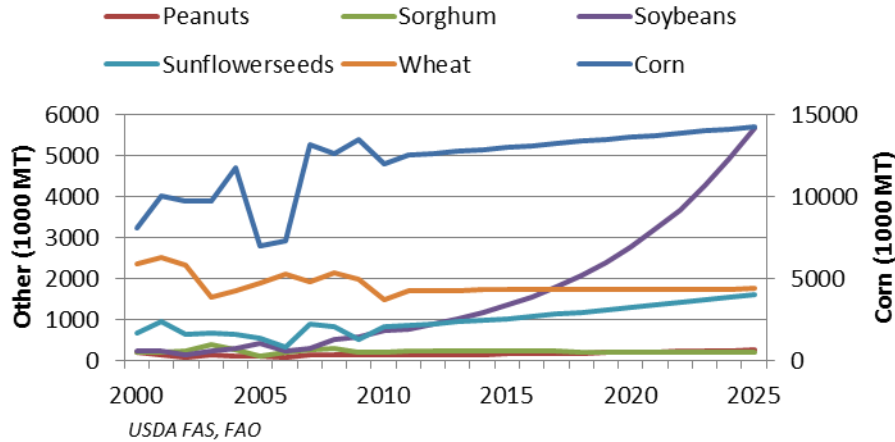
The Economist Intelligence Unit predicts 3.5% growth until 2020, and after that, 4.5% growth through 2030.

South Africa: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
44,760	47,793	50,133	51,431	52,573	53,751

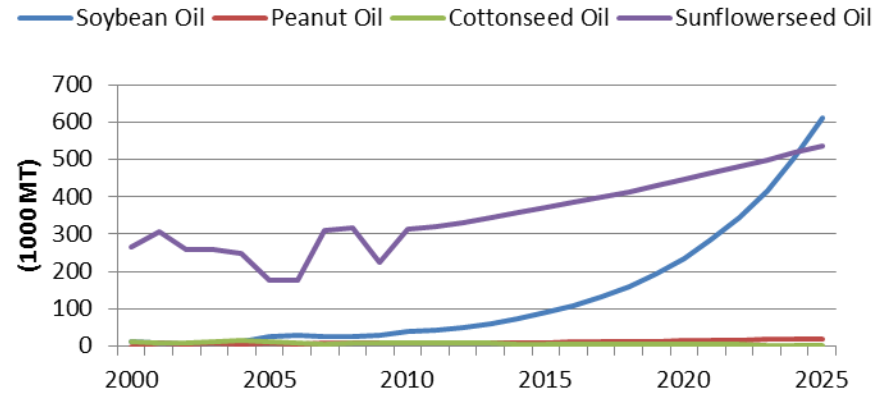
United Nations, World Population Prospects: 2010 Revision

South Africa: Historical and Projected Production and Consumption

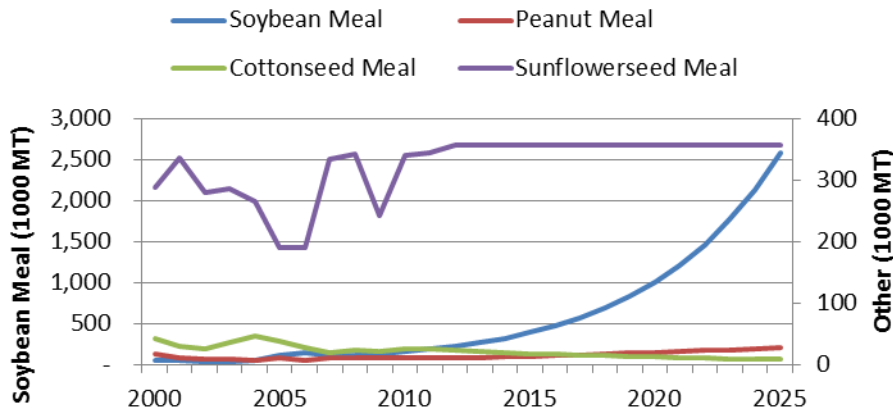
South African Crop Production



South African Vegetable Oil Production

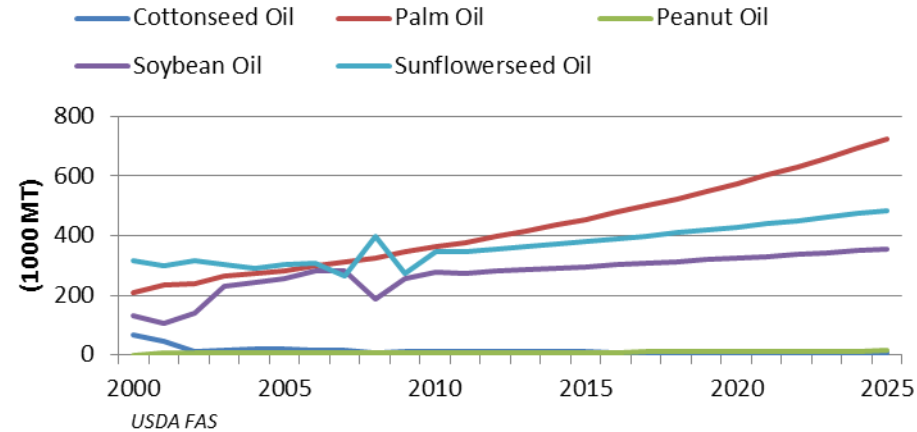


South African Meal Production



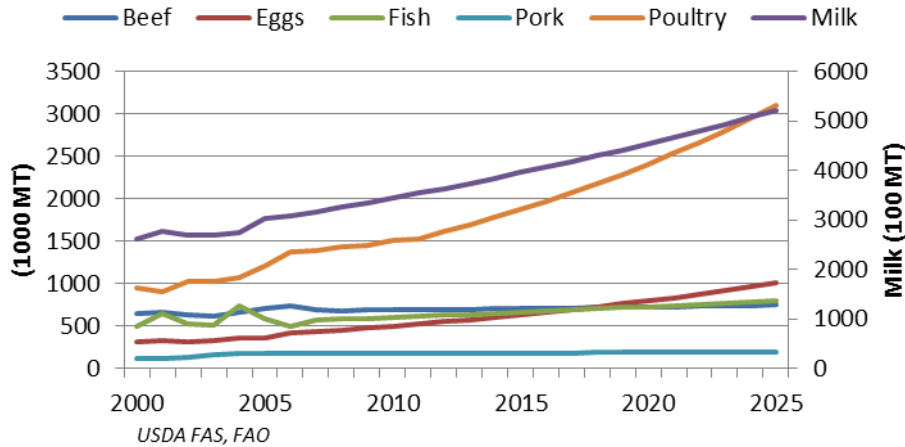
USDA FAS

South African Vegetable Oil Consumption

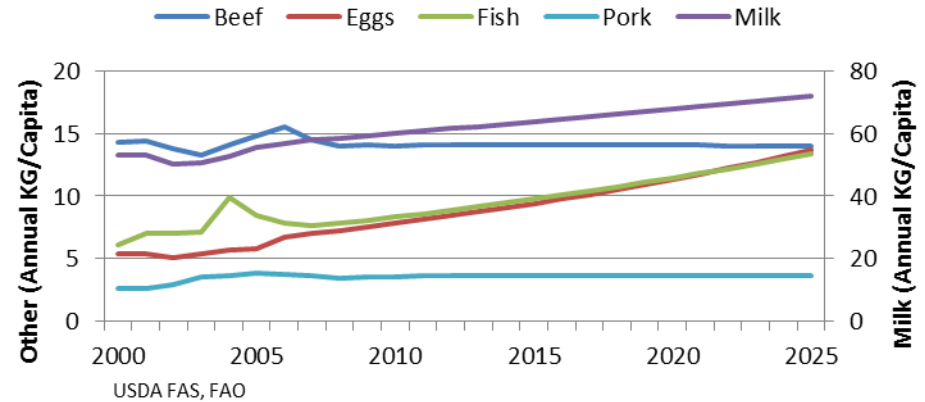


South Africa: Historical and Projected Production and Consumption (Cont'd)

South African Animal Protein Consumption

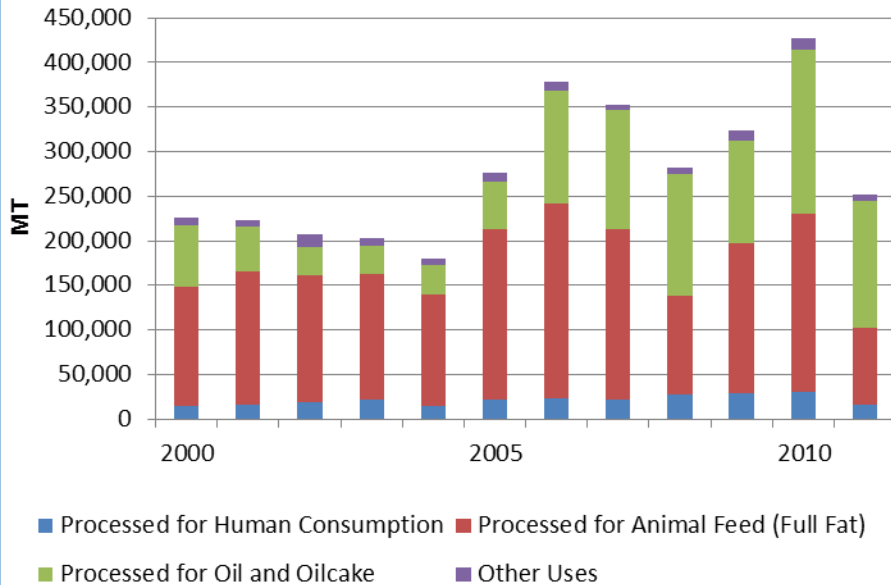


South African Per Capita Animal Protein Consumption

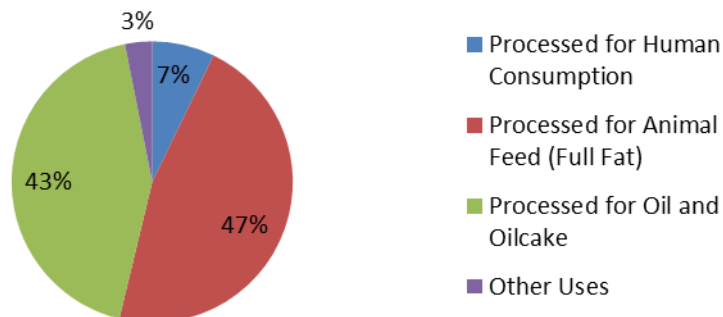


South Africa: Soybean Use

South African Soybean Use



South African Soybean Use - 2010

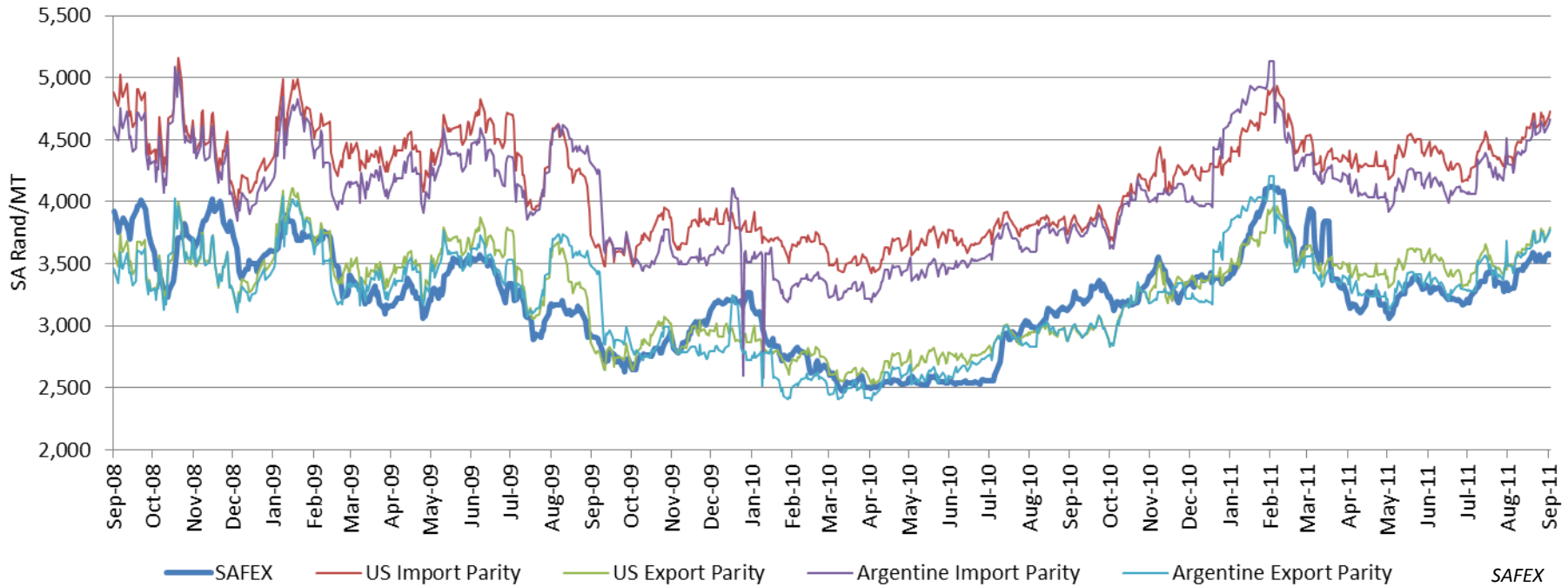


SAGIS

- Data from the South African Grain Information Service (SAGIS) permits an analysis of how domestically-consumed soybeans are used.
- In 2010, 413,600 MT soybeans were processed in South Africa.
- Other soybean uses include seed for planting purposes, seeds released to end consumers, and seeds withdrawn by producers.
- 43% of soybeans were processed to produce soybean oil and high-protein soybean meal.
- In 2010, more than 180,000 MT of soybeans were processed as full-fat soybeans for animal feed. It is important to note that this product cannot be imported or exported, making it an important domestically-produced source of animal feed.
- While human consumption has experienced minor growth, around 1% per year since 2000, crushing of soybeans for high-protein soybean meal and soybean oil has increased at a rate of 6.67% across the same period.

SAGIS

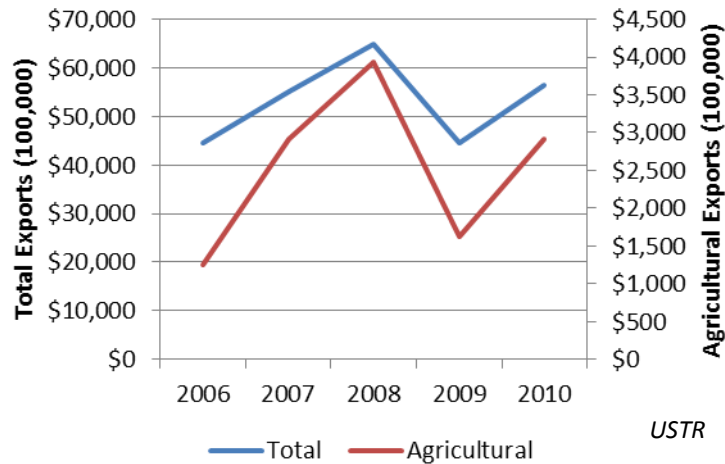
South Africa: Soybean Prices



- The chart tracks soybean prices from September 2008 to September 2011. Import parity shows the value of a MT of soybeans from either the US or Argentina in South Africa.
- Export parity indicates the value of a MT of South African soybeans in either Argentina or the US.

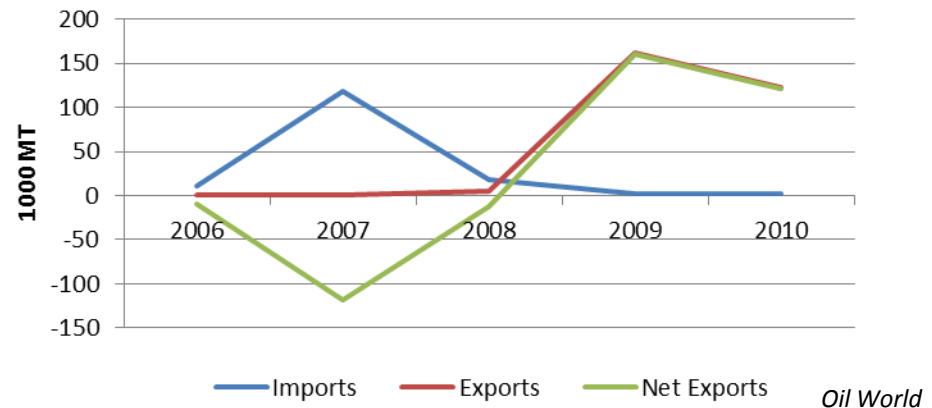
South Africa: Trade Flows

US Exports to South Africa



- The chart above quantifies the existing trade relationship between the United States and South Africa in terms of overall exports and, specifically, agricultural exports.
- In 2010, Nigeria was the only Sub-Saharan African country to exceed South Africa in terms of value of agricultural imports from the US.
 - South Africa: \$292 million
 - Nigeria: \$949 million

South African Soybean Trade Balance



- With the exception of 2007, when South Africa imported just over 100,000 MT of soybeans from Argentina, the country has imported negligible quantities of soybeans.
- South African exports have grown dramatically since 2008, increasing to more than 120,000 MT in 2010 from just 300 MT.
- Since 2009, the South African soybean export market has been dominated by exports to Southeast Asia, especially Indonesia and Malaysia, as well the UAE and Saudi Arabia in the Middle East.

West Africa

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 - Tanzania

Senegal: Political Climate, Economic and International Affairs



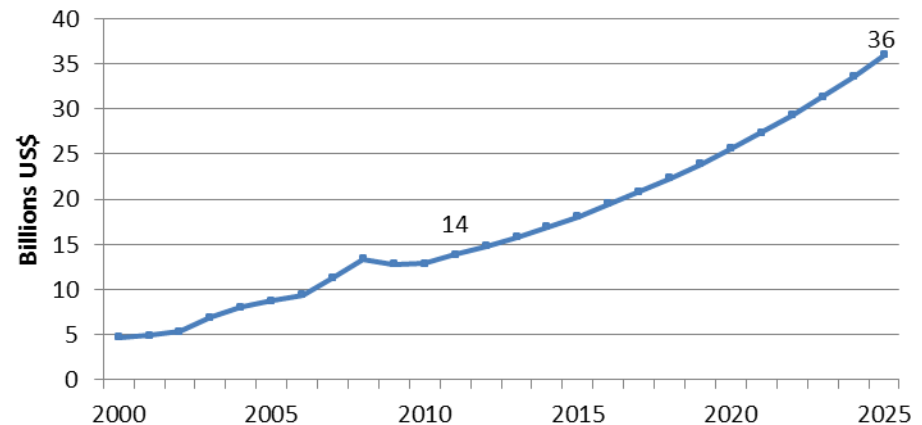
Economist Intelligence Unit

- President Abdoulaye Wade is part of the Parti Démocratique Sénégalais (PDS).
 - President Wade is challenging the 2-term limit by considering running for another term, compromising the democratic system.
- Outside of Sub-Saharan Africa, Senegal's primary trading partner is France; however, the country's ties to China are growing rapidly.
- Remittances from Senegalese emigrants comprise a large part of the country's income.
- Senegal has ambitious plans to develop the agricultural sector.
 - The Accelerated Growth Strategy is in place, and the country is looking for foreign investment to promote and sustain growth.
 - Senegal has a target of 7% annual growth in the agricultural sector.
- Electricity shortages are impeding investments.

Senegal: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
9,506	10,872	12,434	14,161	15,998	17,931

United Nations, *World Population Prospects: 2010 Revision*

Senegal: Historical and Projected GDP

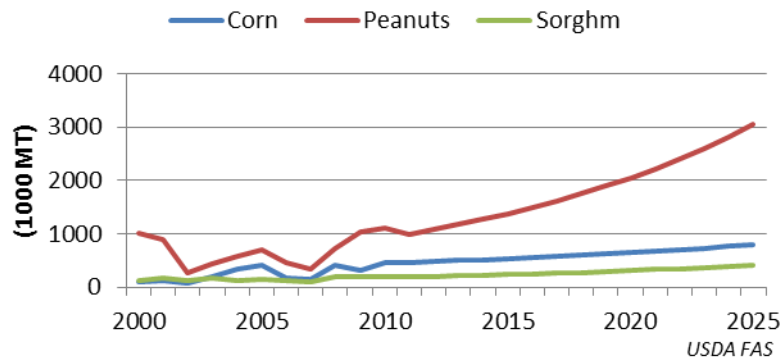


IMF World Economic Outlook

Between 2010 and 2025, a CAGR of 7% is projected.

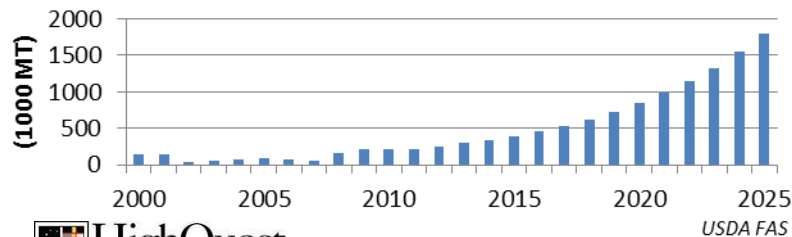
Senegal: Historical and Projected Production and Consumption

Senegalese Crop Production

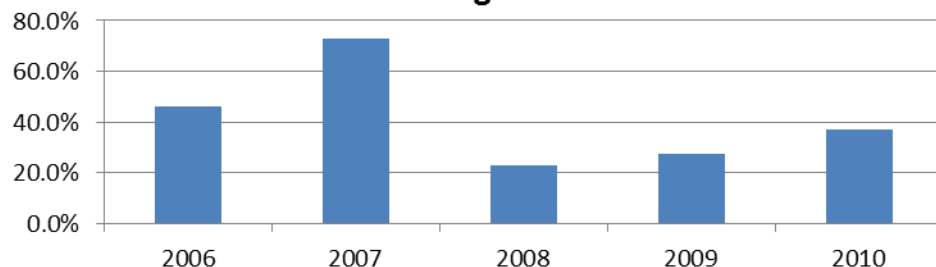


- Peanuts are the dominant crop. A recent estimate indicates the 2011 crop will yield 1,000,000 MT.
- The USDA's FAS reports that the Senegalese government subsidizes peanut production.
- Peanuts are processed to produce peanut oil, and much of the peanut oil serves export markets including France and China.
- 2011 estimates of peanut oil production show Senegal is producing 218,000 MT of peanut oil, and production is projected to increase.

Senegalese Peanut Oil Production

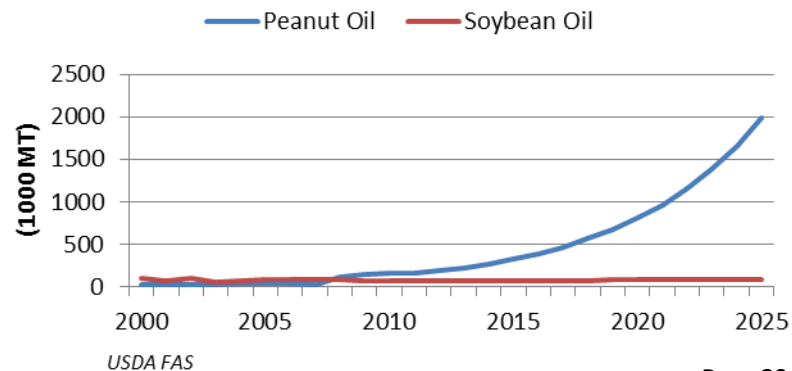


Senegalese Peanut Oil Exports as a Percentage of Production



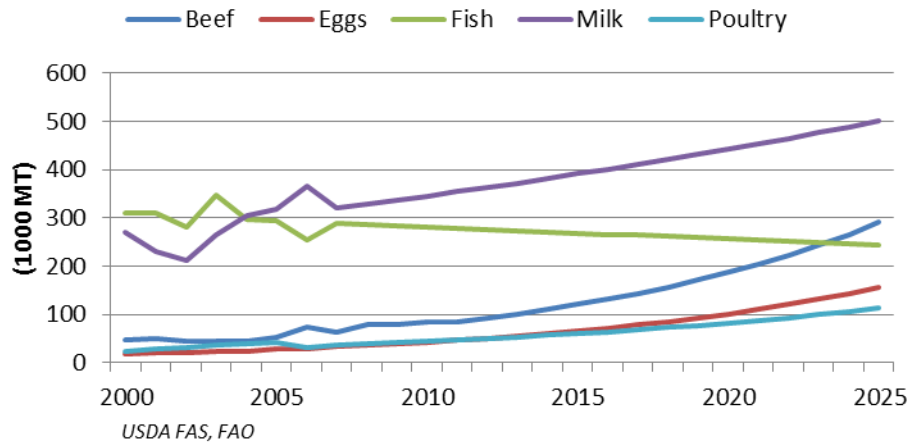
- In 2010, nearly 40% of peanut oil was exported, provoking the importation of substitute vegetable oils, including soybean oil and palm oil.
- Soybean oil consumption has been increasing gradually, and is projected to increase at an annual rate of about 3%. Presently, this consumption is satisfied by imports.
- Peanut oil's local availability, coupled with increasing domestic production make the oil highly competitive.

Senegalese Vegetable Oil Consumption

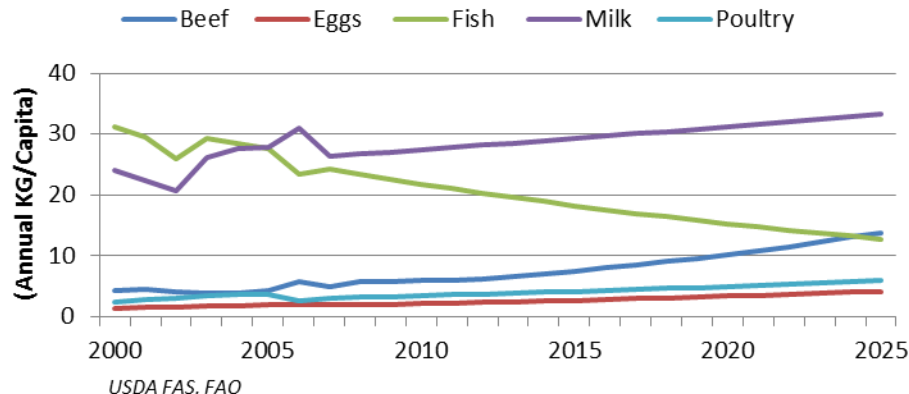


Senegal: Historical and Projected Production and Consumption II

Senegalese Animal Protein Consumption



Senegalese Per Capita Animal Protein Consumption



- Fish as a protein source is slated to decline. At the same time, poultry and beef consumption is expected to increase.
- Senegal has banned the importation of poultry, and this has necessitated the development of the domestic poultry sector.
- The primary opportunity for exports to Senegal is soybean oil, but as the country's domestic poultry sector continues to develop and poultry consumption increases, more soybean meal will be needed.
- This demand will be satisfied by either increased domestic production or by imports from the players in the soybean oil market.

Ghana: Political Climate, Economic and International Affairs



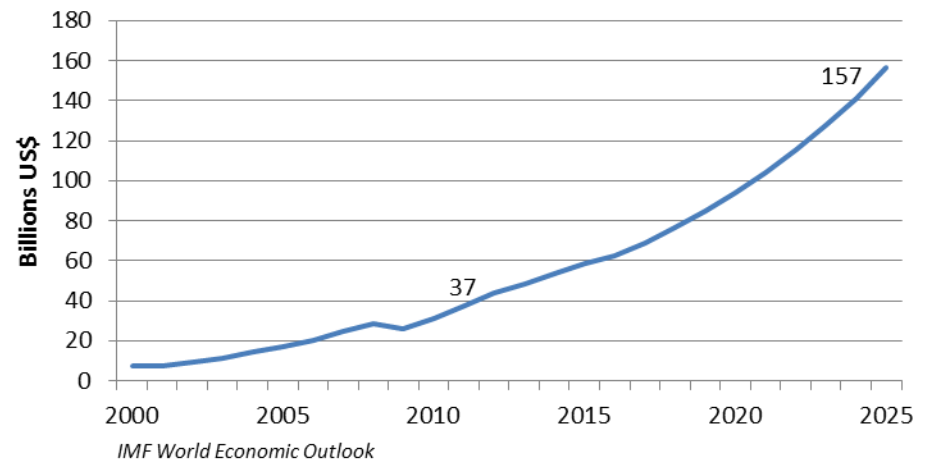
Economist Intelligence Unit

- President John Atta Mills represents the National Democratic Congress (NDC)
 - The NDC is characterized by intraparty turmoil, and 2012 elections may bring a change in leadership.
- Ghanaian oil production is a relatively recent phenomenon, and indecision exists regarding how to manage oilfields and oil revenues.
- Foreign affairs are evolving, especially because of China's position as a funder and creditor of infrastructure and development projects.
- Historically, Ghana has had very good trade relations with the US.
- Fearing inflationary prices, the government has been reluctant to import agricultural products.

Ghana: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
19,165	21,640	24,392	27,315	30,325	33,399

United Nations, World Population Prospects: 2010 Revision

Ghana: Historical and Projected GDP

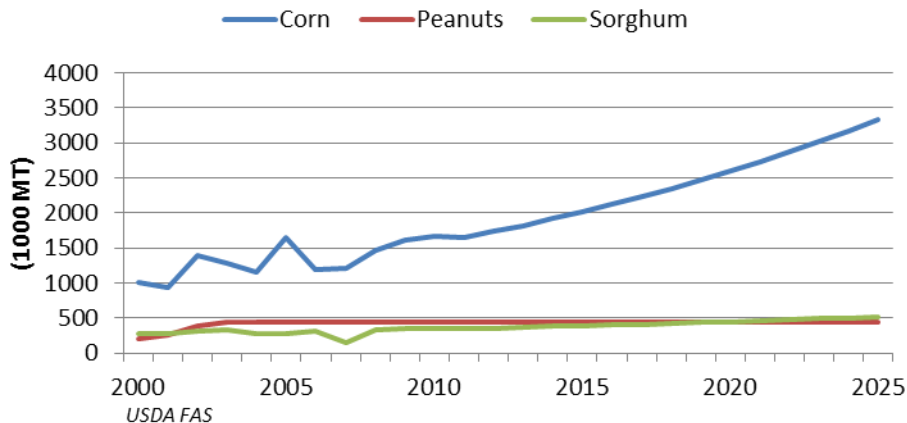


Between 2010 and 2025, a CAGR of 10.8% is anticipated.

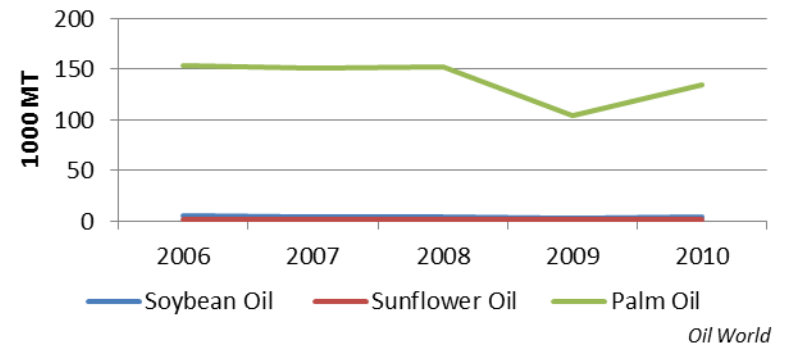
Ghana: Historical and Projected Production and Consumption

- The Ghanaian Ministry of Food and Agriculture data reports 145,000 MT soybean production in 2010, up from 113,000 MT production in 2009.
- A fraction of an estimated 15-30 commercial farmers in Ghana may be involved in soybean production. Smallholders dominate soy production.
- The Ghana Commercial Agriculture Project, executed by the World Bank and USAID, is in place and aims to facilitate private-public partnerships and match investors with opportunities to commercialize production and processing. The Project promises to improve the market for the soybean complex in Ghana.
- Ghana is a significant corn grower, and expects this trend to continue. 1.6 million MT were produced in 2011.

Ghanaian Crop Production

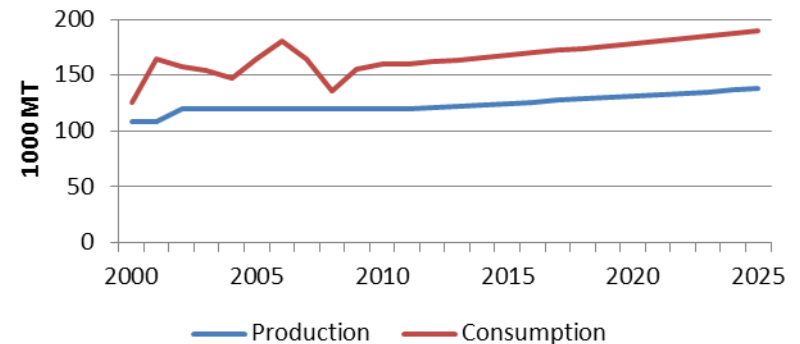


Ghanaian Vegetable Oil Imports



- Ghana's vegetable oil imports are dominated by palm oil (134,600 MT in 2010), which is also produced domestically.
- Soybean oil imports amounted to 3,600 MT in 2010, sunflower oil 1,600 MT.

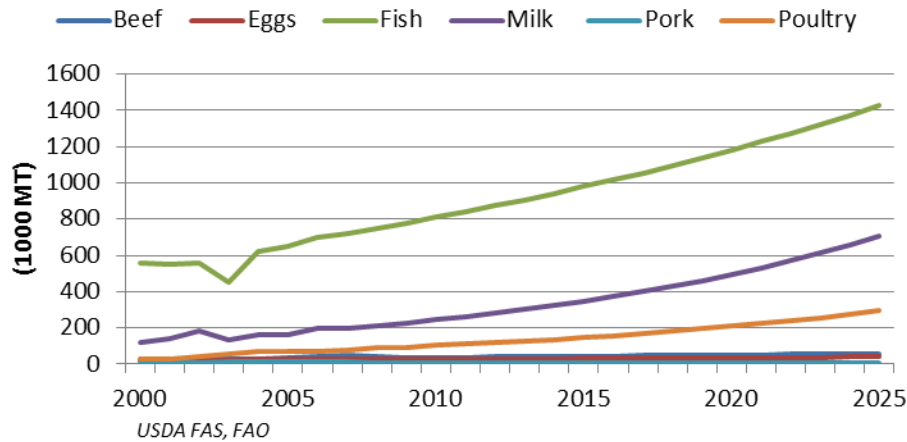
Ghanaian Palm Oil Production and Consumption



USDA FAS

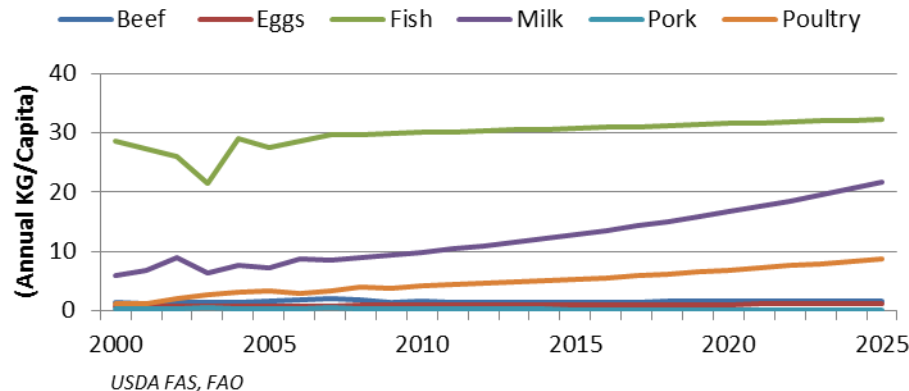
Ghana: Historical and Projected Production and Consumption (cont'd)

Ghanaian Animal Protein Consumption



- All forms of animal protein consumption are projected to increase through 2025.
- Increased poultry production promises to continue to increase demand for soybean meal, especially in light of the rising cost of fishmeal.

Ghanaian Per Capita Animal Protein Consumption



Nigeria: Political Climate, Economic and International Affairs



Economist Intelligence Unit

- President Goodluck Jonathan represents the People’s Democratic Party.
 - Jonathan’s presidency has been defined by overt social tensions between the country’s Muslim northern and Christian southern regions.
 - Thus, the cabinet must be balanced with northern and southern members to promote equal representation.
- The government is largely financed by oil revenues, and the price of oil constitutes a good barometer of economic growth.
- International relations, especially with respect to the US, are characterized by petropolitics, as Nigeria supplies oil to the US.
- Questions of policy reform must address infrastructure inadequacies.
- There is need for a less corrupt financing of public projects and a more reliable electricity supply.
- Nigeria has the goal of becoming one of the world’s 20 largest economies by 2020.
 - As of now, projected growth rates of around 3.4% indicate this may be out of reach, as double digit growth would be necessary to achieve this goal.
- The agricultural sector is proving to be an important employer and a catalyst for economic growth.

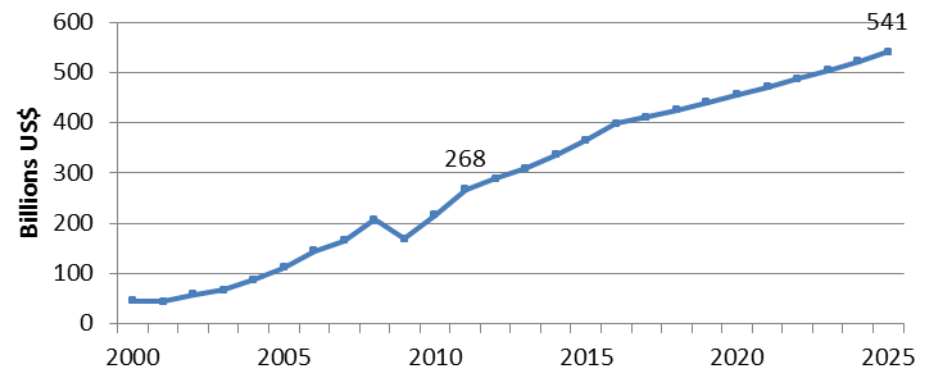
Nigeria: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
123,689	139,823	158,423	179,791	203,869	229,796

United Nations, *World Population Prospects: 2010 Revision*

The Economist Intelligence Unit anticipates 3.4% GDP growth until 2020, and a growth rate of 3.5% from then until 2030.



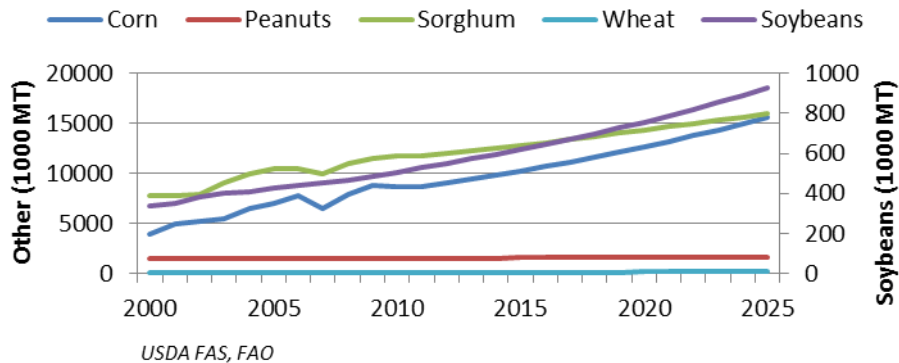
Nigeria: Historical and Projected GDP



IMF World Economic Outlook, Economist Intelligence Unit

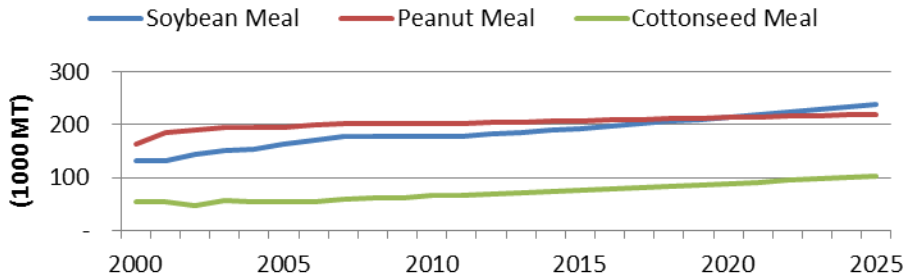
Nigeria: Historical and Projected Production and Consumption

Nigerian Crop Production



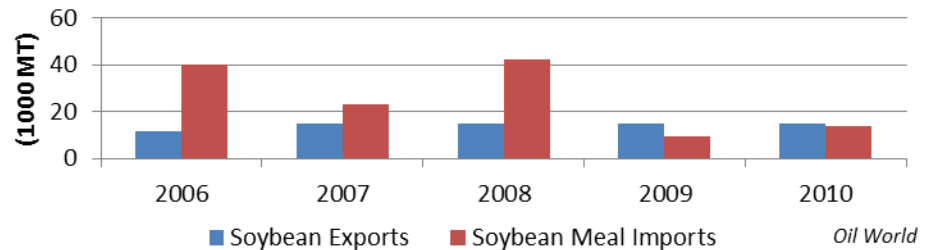
- Nigeria will produce nearly 530,000 MT soybeans in 2011.
- Production is located in Nigeria's central states, specifically Benue.
- If historical annual growth rates continue, domestic production may near 1 million MT by 2025.

Nigerian Meal Production



- In Nigeria, the bulk of soybeans produced are crushed for animal feed and edible oil.
- HighQuest interviews reveal that domestic output lags demand, causing soybean complex commodities to be expensive.
- Domestic shortfalls have led crushers and feed millers to import soybeans and soybean meal.
- Projections show that Nigeria currently produces more peanut meal than soybean meal. However, livestock farmers prefer to use soybean meal over peanut meal for feed, and soybean production is projected to surpass peanut meal by 2020.

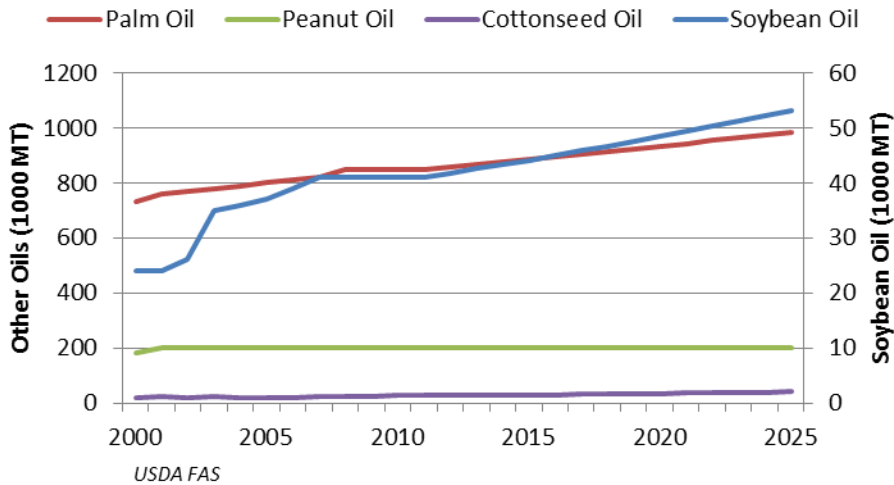
Nigerian Soybean Complex Trade



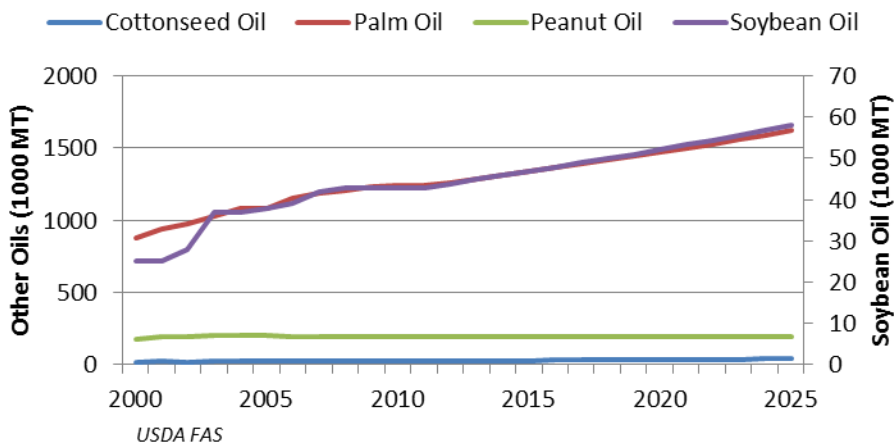
- Nigeria exported 15,000 MT of soybeans in 2010.
- However, imports of soybean meal were nearly 14,000 MT in 2010.
- These imports originated exclusively in Argentina.

Nigeria: Historical and Projected Production and Consumption (Cont'd)

Nigerian Vegetable Oil Production



Nigerian Vegetable Oil Consumption



- Although palm oil remains Nigeria's top-produced vegetable oil, soybean oil production will grow steadily, and will be at more than 50,000 MT by 2025.
- Nigeria is promoting soybean products to consumers, and expanding production and processing capacities is likely to bolster oil production.
- Historical Nigerian vegetable oil consumption patterns predict soybean oil consumption and palm oil consumption will grow at a similar annual rate through 2025.
 - Current soybean oil consumption: 43,000 MT
 - Current palm oil consumption: 1.2 million MT

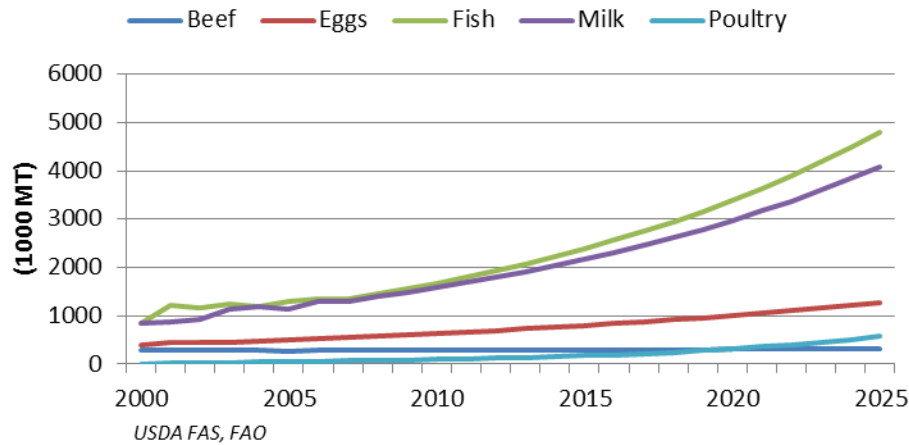
Nigeria's Palm Oil Net Imports



- Despite significant domestic production of palm oil (850,000 MT in 2011), Nigeria must import to meet domestic consumption. The country's net imports of palm oil were around 760,000 MT in 2010.

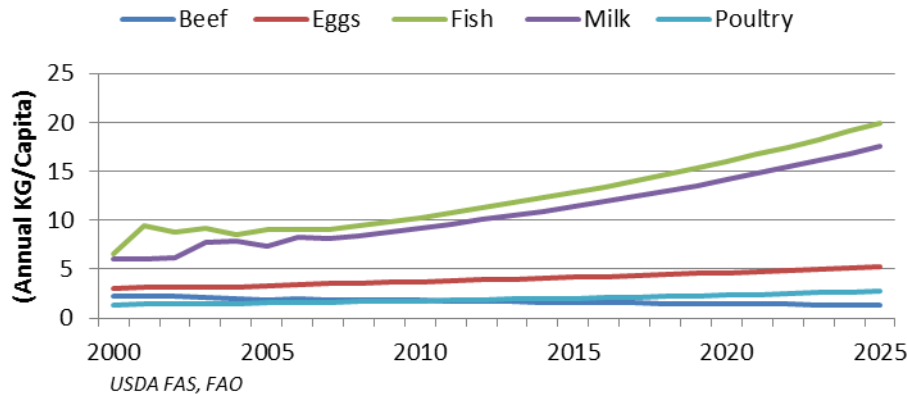
Nigeria: Historical and Projected Production and Consumption (Cont'd)

Nigerian Animal Protein Consumption



- A larger, more reliable supply of soybean meal, whether through increased production or imports, will improve the domestic livestock sector, especially the poultry industry, and contribute to increased protein consumption in Nigeria.

Nigerian Per Capita Animal Protein Consumption



Southern Africa

- South Africa
- West Africa
 - Senegal
 - Ghana
 - Nigeria
- Southern Africa
 - Angola
 - Zimbabwe
 - Mozambique
 - Zambia
- East Africa
 - Kenya
 - Ethiopia
 - Tanzania

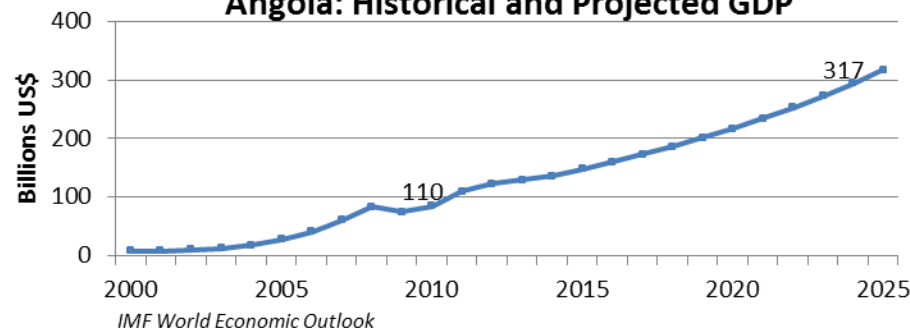
Angola: Political Climate, Economic and International Affairs



Economist Intelligence Unit

- Angola is led by President José Eduardo dos Santos, a representative of the Movimento Popular de Libertação de Angola (MPLA).
- The popular vote system was abolished by the new constitution adopted in February 2010, and now the parliamentary party head of the controlling party becomes the president.
 - This system limits the ability of opposing parties to effect policy changes.
- The country continues to recover from a civil war that ended in 2002.
 - Investing in infrastructure as a means of economic growth has been the country's public policy strategy.
- Angola's international relations are defined by its need for multiple and diverse sources of credit, financing, and investment.
 - The country has been making a visible effort, especially with South Africa, to assimilate the Southern African Development Community.
 - Of the major soy producing countries, Angola enjoys the best relationship with Brazil.
 - Brazil, Portugal, and China regularly provide credit and help finance Angolan reconstruction and expansion projects.
- Angola is plagued by strained relations with the neighboring Democratic Republic of Congo.

Angola: Historical and Projected GDP

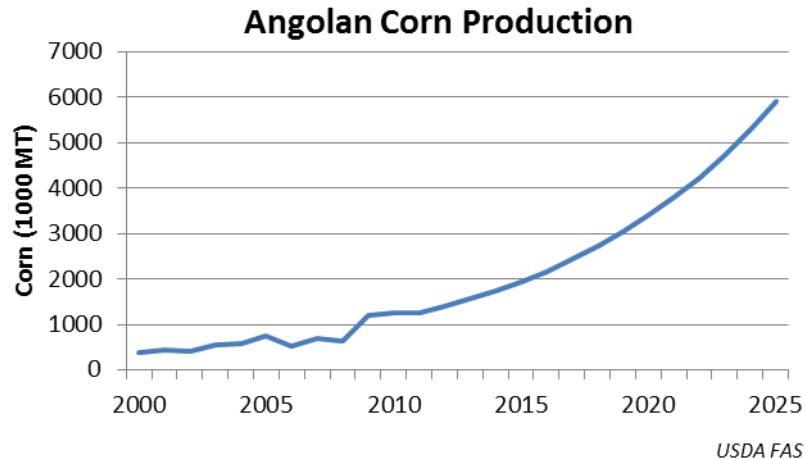


- Economist Intelligence Unit data indicates crude oil production will increase at a rate of 3% annually through 2015, helping to ensure steady GDP growth.
- IMF data predicts an annual GDP growth rate of 7.8%.
- Agriculture comprises just 10% of GDP, leaving room for diversification including increased production and processing.
- China trades more with Angola than any other African country, a relationship that has yielded investment projects and increased urban planning.

Year	2000	2005	2010	2015	2020	2025
Population	13,926	16,489	19,082	21,842	24,780	27,767

United Nations, World Population Prospects: 2010 Revision

Angola: Historical and Projected Production and Consumption

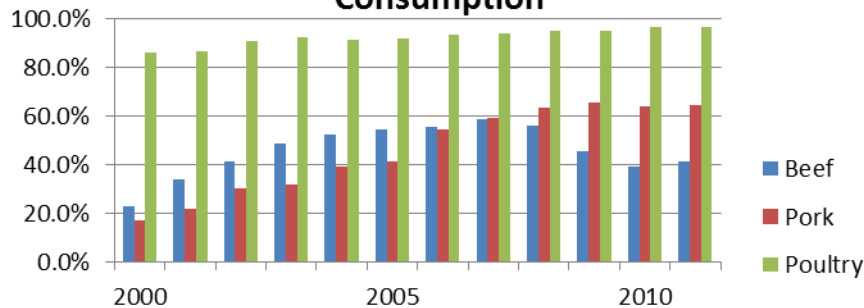


- Cassava and potatoes are Angola's staple crops, followed by corn production.
 - 2007 data shows 8.8 million MT and 615,000 MT production of cassava and potatoes, respectively.
 - 2011 corn production estimate is over 1.2 million MT.

Angola: Historical and Projected Production and Consumption (Cont'd)

- A primary catalyst of demand for soybean meal in Sub-Saharan Africa is the growing poultry industry and its subsequent need for feed.
 - This is not the case in Angola.
 - Poultry is not the dominant domestically-produced livestock.
 - Recent estimates place annual soybean meal imports at about 1,000 MT.

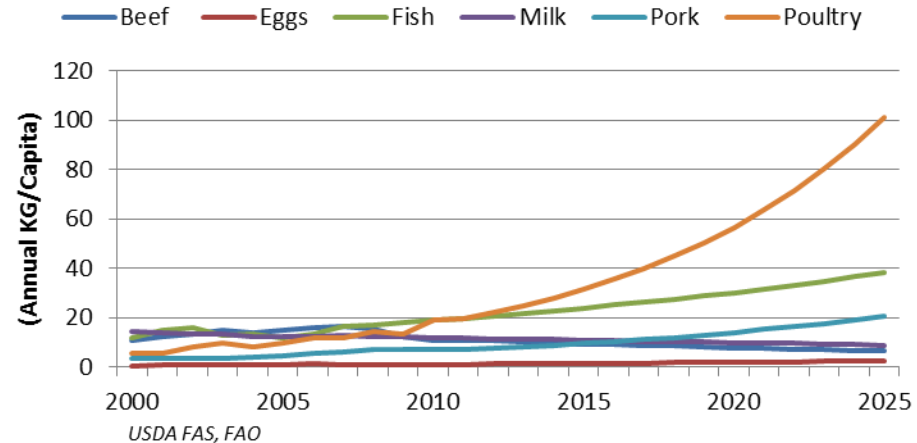
Angolan Imports as a Percentage of Consumption



USDA FAS

- In 2011, Angola produced just 3.5% of the 246,000 MT of poultry it consumed.
- In contrast, Angola produces 59% and 35% of its beef and poultry consumption, respectively.
- Poultry demand is filled by imports from Brazil, Argentina, and Paraguay.

Angolan Per Capita Animal Protein Consumption



USDA FAS, FAO

- Projections of per capita animal protein consumption indicate poultry consumption will grow rapidly, ensuring the continued importation of poultry in the absence of development of domestic poultry and feed milling industries.

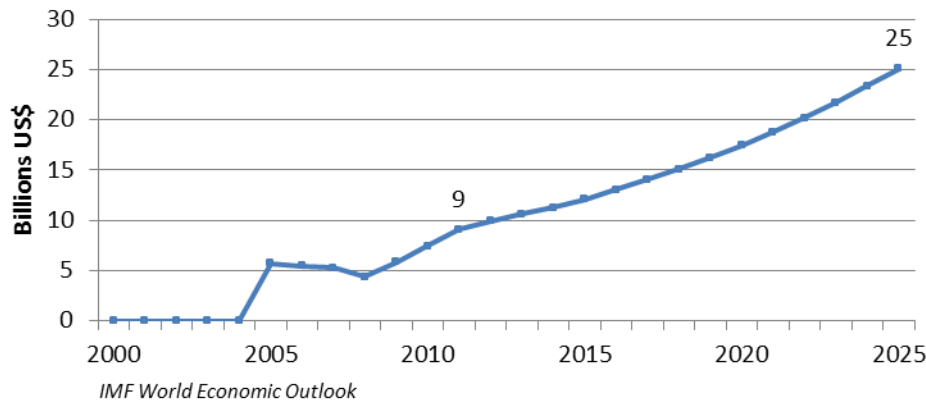
Zimbabwe: Political Climate, International and Economic Affairs

- President Robert Mugabe represents the Zimbabwe African National Union-Patriotic Front (ZANU-PF).
- There is a notable disagreement between Western countries and Zimbabwe, as there has been talk of nationalizing Western MNCs from countries that have threatened or imposed sanctions on Zimbabwe.
- Zimbabwe has looked to Asia to forge new relationships.
- Since 2009, Zimbabwe has been recovering from a period of hyperinflation and the collapse of its economy.
- The domestic agricultural sector is especially limited by insufficient access to credit and inadequate electricity.
- Recently, Zimbabwe's GDP growth has been stoked by high gold and platinum prices.



Economist Intelligence Unit

Zimbabwe: Historical and Projected GDP



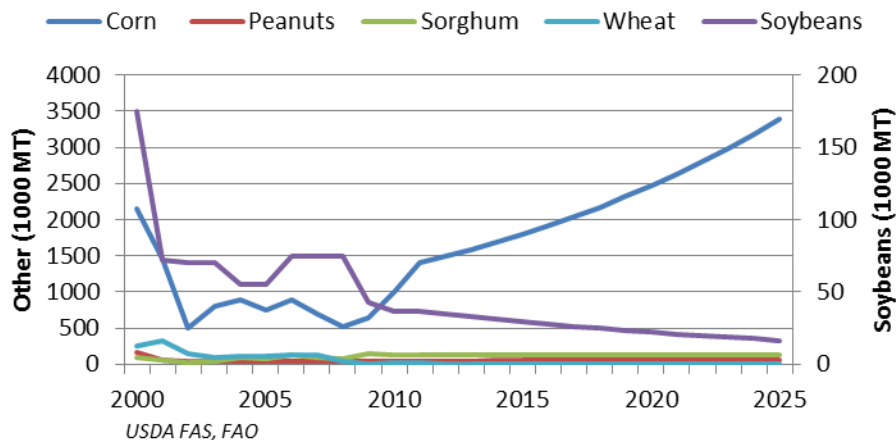
Between 2010 and 2025, a CAGR of 7.5% is projected.

2000	2005	2010	2015	2020	2025
12,509	12,571	12,571	14,001	15,543	16,662

United Nations, World Population Prospects: 2010 Revision

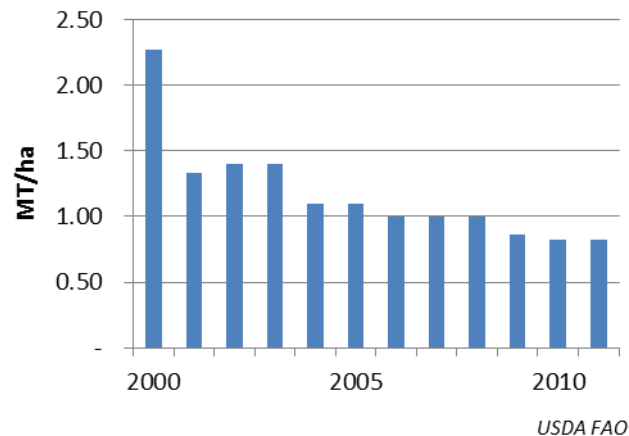
Zimbabwe: Historical and Projected Production and Consumption

Zimbabwean Crop Production



- Soybean production has been declining since 2000.
- This is due to land reform efforts, which especially targeted and caused the decline of commercial farming.
- Notwithstanding land reform, recent reports indicate commercial farming accounts for 65% of domestic soybean production.
- Given this recent history, projections show a continuing decline in soybean production.
- Corn is the staple crop produced in Zimbabwe, and 2011 data reports production was at 1.4 million MT.
- 2011 production of soybeans is nearly 40,000 MT, down from an estimated 175,000 MT in 2000.

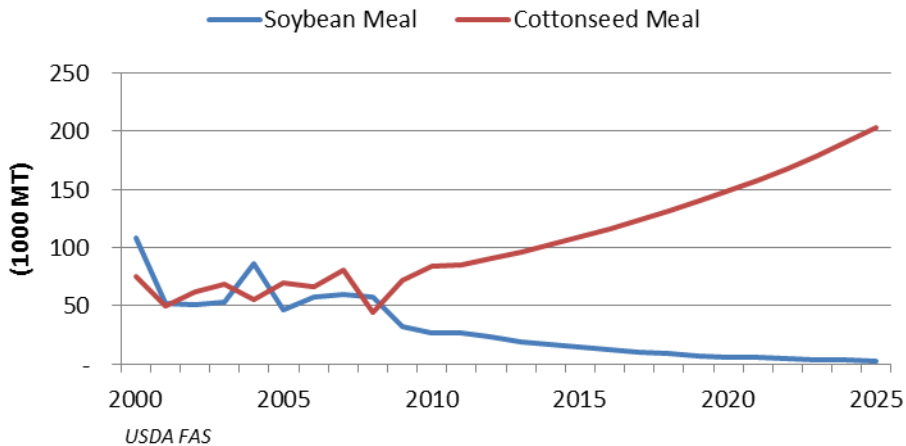
Zimbabwean Soybean Yields



- Soybean yields in Zimbabwe have been dropping as production has gone down.
- 2011 yields are less than half of what they were in 2000.
- Domestic soybean production must be supplemented by imports and there is underutilized processing capacity.

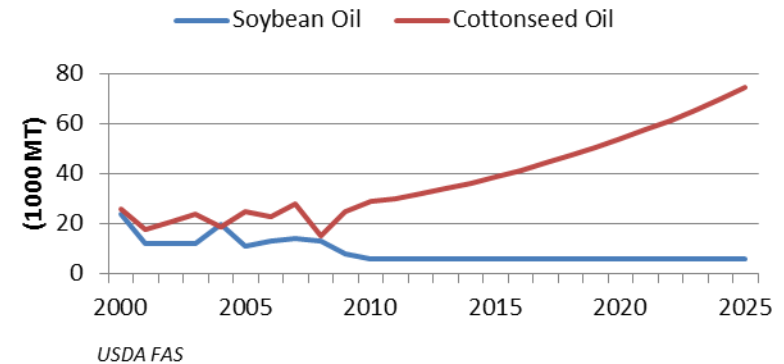
Zimbabwe: Historical and Projected Production and Consumption (Cont'd)

Zimbabwean Meal Production

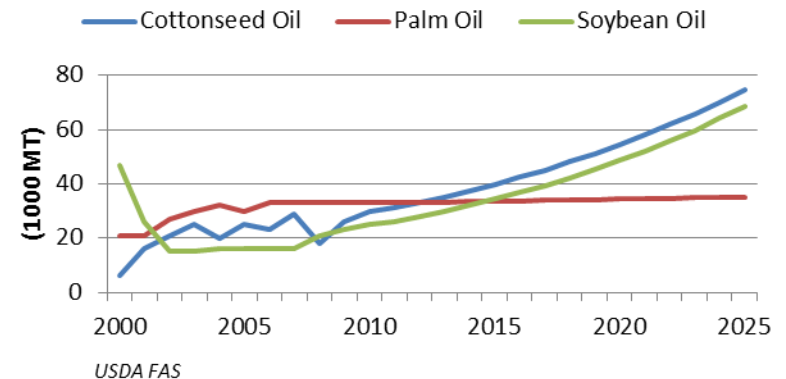


- Soybean meal production is projected to decrease due to recent declines in production.
- Harare is the epicenter of soybean processing.
- TechnoServe estimates that only 16% of soybean processing capacity is being utilized because of soybean supply constraints.

Zimbabwean Vegetable Oil Production



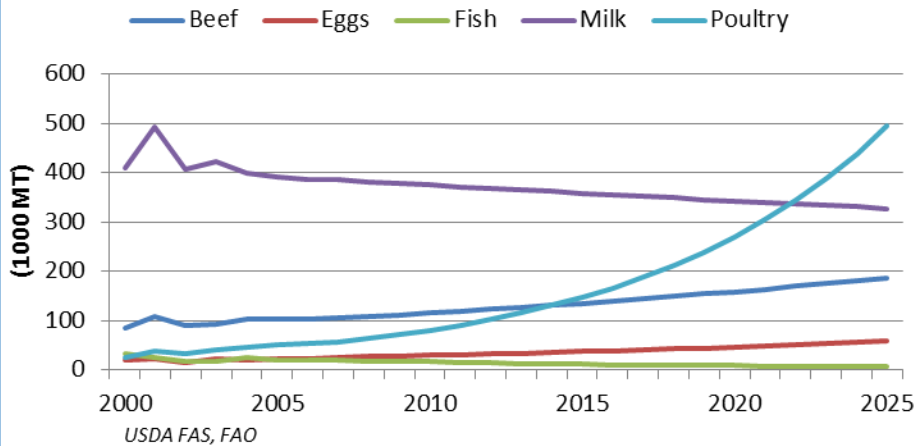
Zimbabwean Vegetable Oil Consumption



- Zimbabwean vegetable oil consumption data indicates that demand for soybean oil is already established.
- Current production projections, whilst dramatized by recent production declines, indicate demand will exceed domestic production and imports will increase.

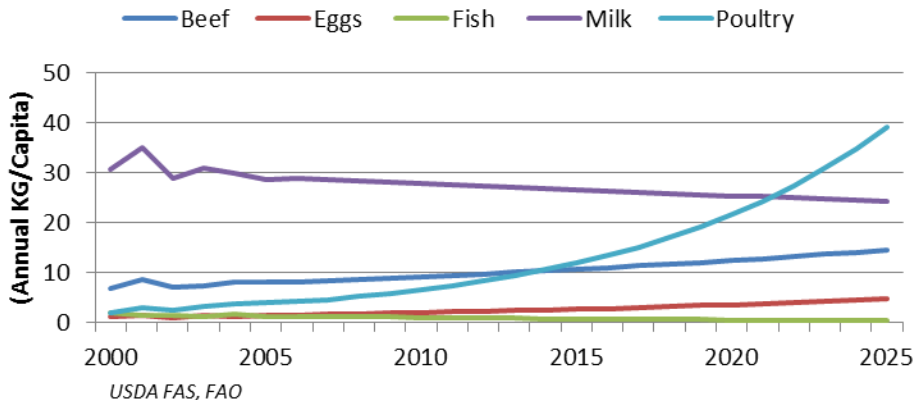
Zimbabwe: Historical and Projected Consumption (Cont'd)

Zimbabwean Animal Protein Consumption



- Feed is the sole use of soybean meal in Zimbabwe.
- Given historical and projected protein consumption patterns, the poultry industry is poised to grow rapidly, and represents the greatest potential source of increased demand for soybean meal.
- TechnoServe estimates that only 16% of processing capacity that is being utilized based on supply constraints.

Zimbabwean Per Capita Animal Protein Consumption



Mozambique: Political Climate, International and Economic Affairs



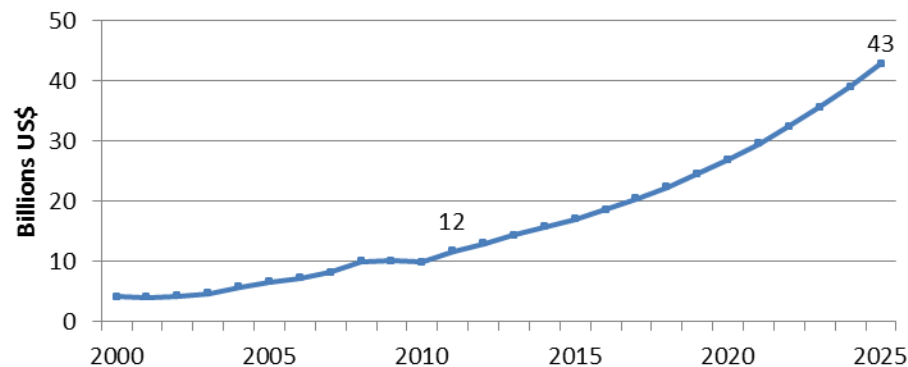
Economist Intelligence Unit

- Frente de Libertação de Moçambique (FRELIMO) party member Armando Guebuzathe is the country's president.
- Concern has been raised, as President Guebuza has redefined the presidential role in ways that have centralized power in the executive branch.
- It is predicted that GDP growth will be fueled not only by foreign direct investment (FDI), but also by international aid.
 - There has been significant FDI from India, China, and Brazil in Mozambique, especially in the mining and transportation sectors.
 - Mozambique is an aid-dependent country.
- Within sub-Saharan Africa, South Africa is Mozambique's top trading partner.
- The Mozambique National Food Production Action Plan has promoted government investment in the agricultural sector in order to improve food security and increase production.
 - The Plan may result in increased demand for soy complex imports.

Mozambique: Historical and Projected Population (1,000s)						
2000	2005	2010	2015	2020	2025	
18,201	20,770	23,391	26,162	29,177	32,439	

United Nations, *World Population Prospects: 2010 Revision*

Mozambique: Historical and Projected GDP

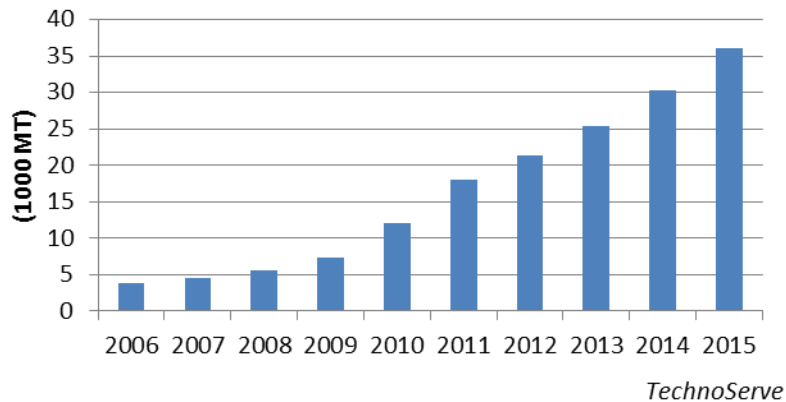


IMF *World Economic Outlook*

Between 2010 and 2025, a CAGR of 9.7% is projected.

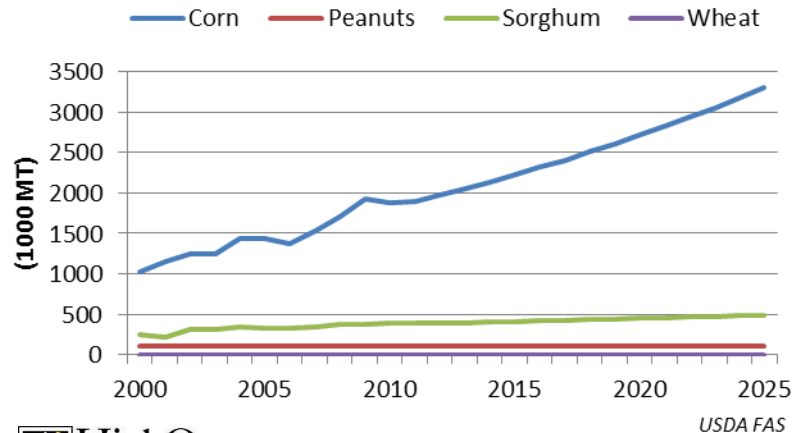
Mozambique: Historical and Projected Production and Consumption

Mozambican Soybean Production



Between 2011 and 2015, soybean production is projected to grow 19% annually.

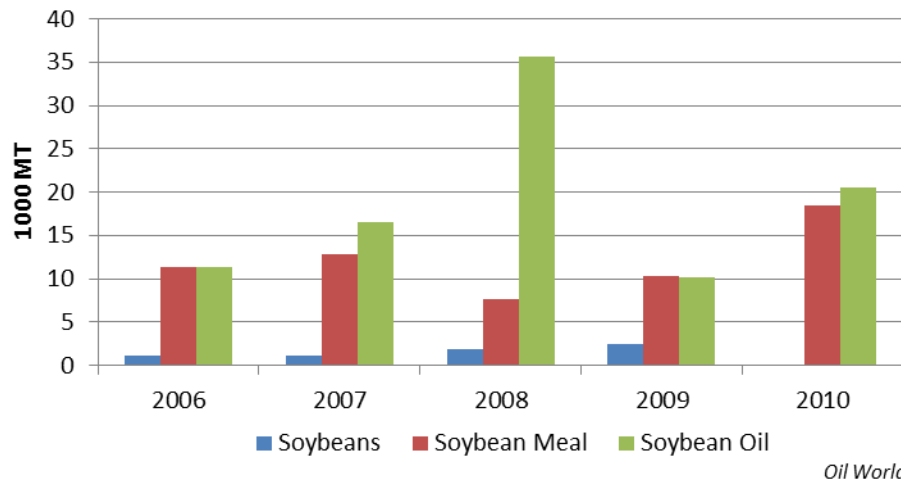
Mozambican Crop Production



- While production of soybeans occurs in northern and center regions of Mozambique, the epicenter of demand is in the south surrounding the capital of Maputo.
- 2010 domestic production was estimated to be 12,000 MT, a 62% increase from 2009 production.
 - 7,250 MT was produced in the northern region.
 - 4,759 MT was produced in the central region.
- 12,300 ha were devoted to soybean production, suggesting an average yield of .98 MT/ha, compared to 1.9 MT/ha in South Africa and 2.77 MT/ha in the United States.
- While smallholders' yields are lower than commercial farmers' the numerical disparity is not known.
- 2011 crop production estimates indicate 17,000-18,000 MT of soybeans will be produced by adding more hectares to production, and this number is expected to double by 2015.
- Demand for soybean meal is outpacing production growth.
- The consumption of the soy complex is dominated by the inclusion of soybean meal in poultry feed.
- Corn is a staple crop, with 2011 production estimated to be 1.9 million MT.
- Some land currently devoted to corn could be incorporated into a crop rotation program to boost soybean production.

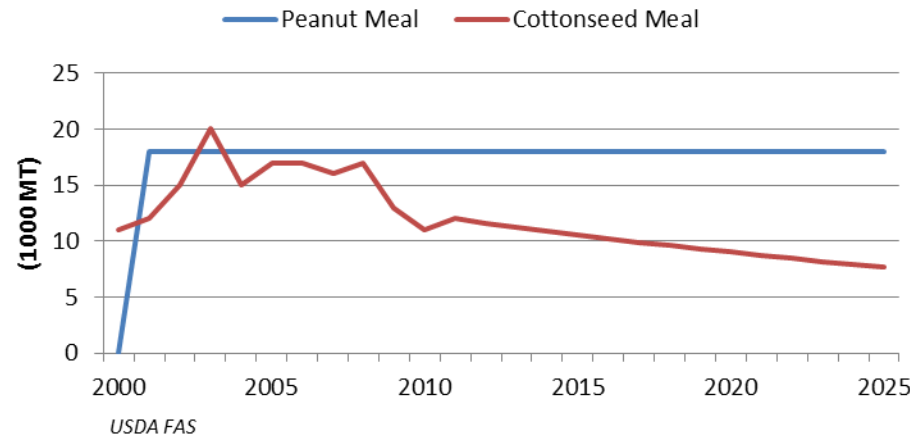
Mozambique: Historical and Projected Production and Consumption (Cont'd)

Mozambican Soy Complex Imports



- In 2010, imports of soybean meal and soybean oil totaled 18,500 MT and 20,500 MT, respectively.
- 30% of the feed used by Mozambican poultry producers is soy-based (soybean meal and full-fat soy).
- Mozambique's poultry association reports that 40 million day old chicks will be raised for broiler production in 2011. Growth is expected in 2012.
- Broiler production alone translates to a need for 36,000 MT of soybeans annually.

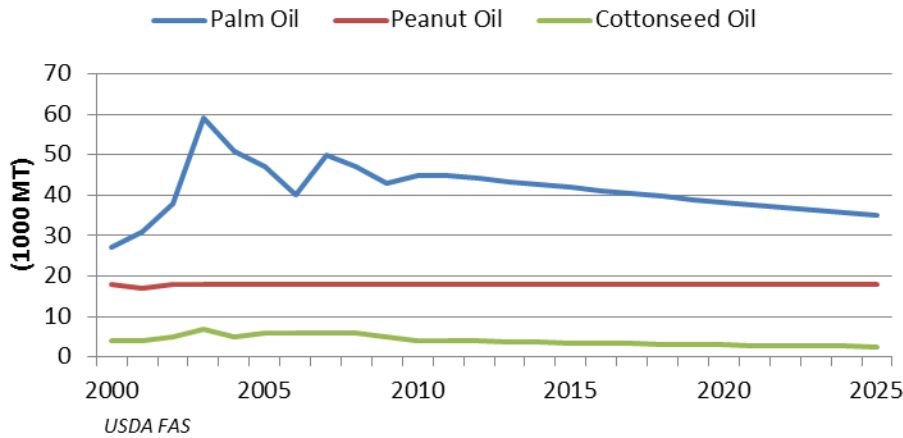
Mozambican Meal Production



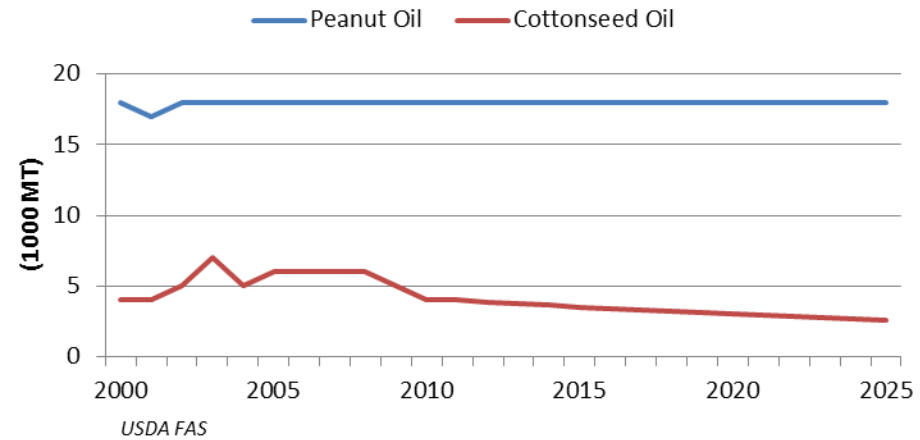
- Projections suggest peanut meal production will plateau and cottonseed meal production will decrease through 2025.

Mozambique: Historical and Projected Production and Consumption (Cont'd)

Mozambican Vegetable Oil Consumption

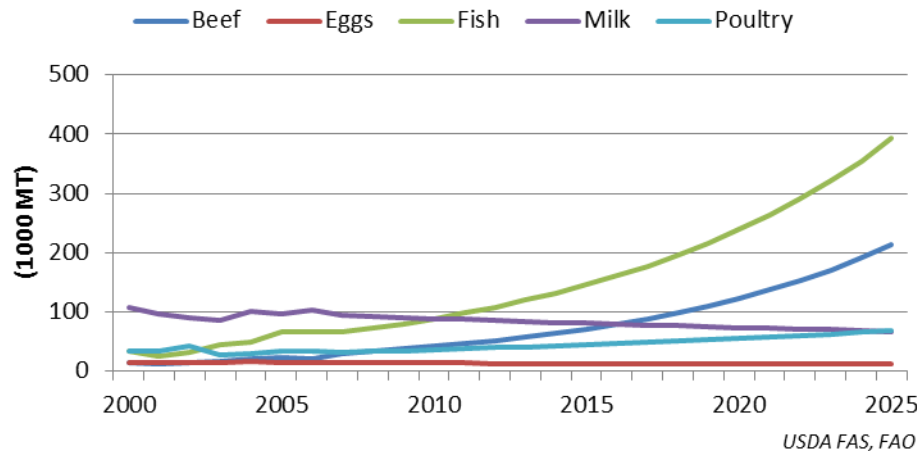


Mozambican Vegetable Oil Production

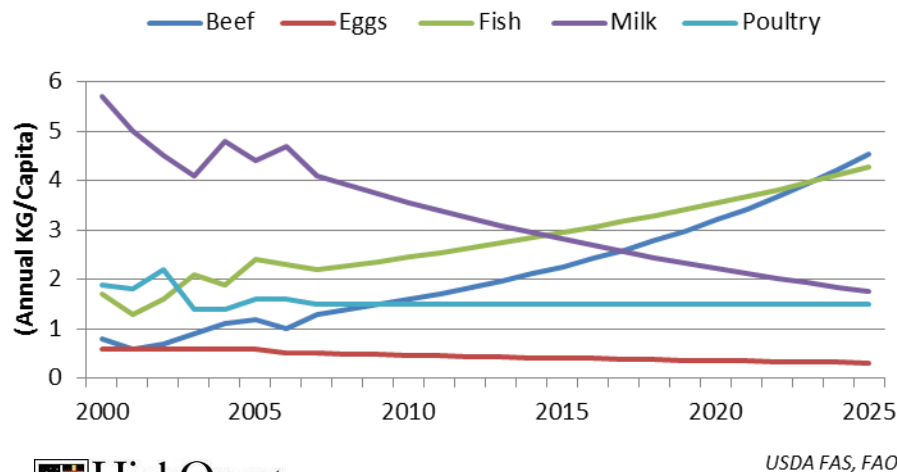


Mozambique: Historical and Projected Production and Consumption (Cont'd)

Mozambican Animal Protein Consumption

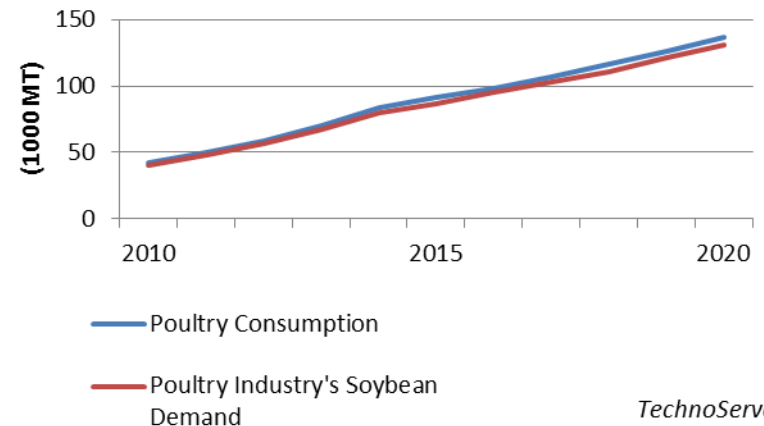


Mozambican Per Capita Animal Protein Consumption



- FAO data estimates 4.3% growth in domestic poultry consumption; however, this figure does not reflect growth anticipated by Mozambique's National Poultry Association and projected by TechnoServe.
- TechnoServe projects 19% annual growth through 2014, followed by 8.6% annual growth in poultry consumption.
- Mozambique has been working to increase the competitiveness of its domestic poultry production, as previously most poultry consumed was imported from Brazil.
- The poultry sector has flourished in recent years, and is spurring the production and importation of soybeans and soybean meal for feed production.
- Rising poultry consumption and demand for soybeans are intimately linked.

Mozambican Poultry Industry's Projected Growth



Zambia: Political Climate, International and Economic Affairs



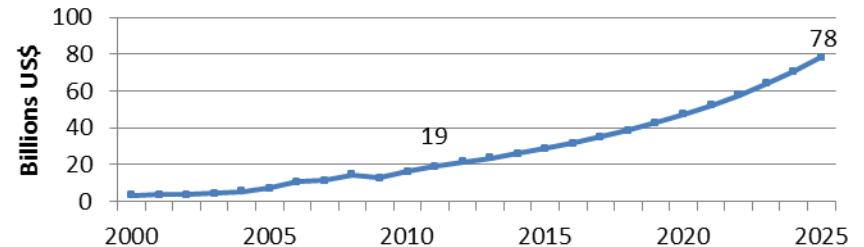
Economist Intelligence Unit

- Opposition party Leader Michael Sata, representing the Patriotic Front (PF), was elected president in September 2011.
 - No major policy changes are anticipated with the change in leadership from former Rupiah Banda.
- Although flows of western aid have been interrupted by allegations of corruption, aid will continue and be supplemented by increasing Chinese investment in and extension of credit to Zambia.
- China is especially interested in Zambia’s copper mining sector.
- Many mines in Zambia are foreign owned, and investment in agriculture has yielded more localized impacts.
- Zambian agricultural policy is currently defined by subsidies for corn production, ignoring the fact that all of the country’s agricultural land is not best suited to corn production.
- Food inflation in Zambia has been mitigated by the fact that Zambia has substantial domestic production.

Zambia: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
10,202	11,462	13,089	15,242	17,918	20,972

United Nations, *World Population Prospects: 2010 Revision*

Zambia: Historical and Projected GDP

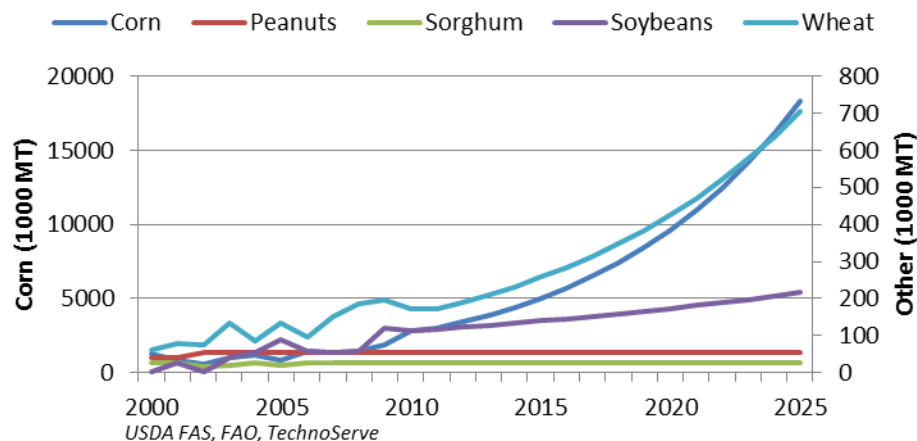


IMF World Economic Outlook

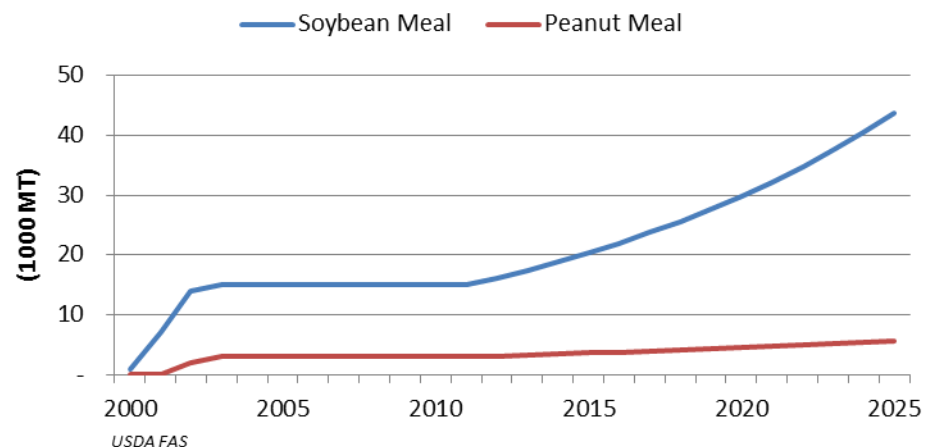
Between 2010 and 2025, a CAGR of 10.6% is projected.

Zambia: Historical and Projected Production and Consumption

Zambian Crop Production



Zambian Meal Production

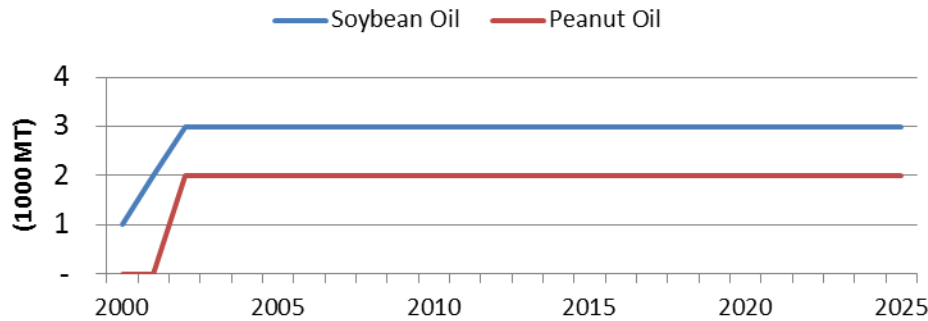


- Current data estimates Zambian soybean production to be 112,000 MT.
- High soybean production rates of 4.5% are projected through 2025.
- Since it has vast swaths of undeveloped land, Zambia has potential hectares to expand soybean production.
- Corn is the staple crop in Zambia and is projected to grow alongside soybeans and wheat.

- Soybean meal production increased at a rate of nearly 8% between 2001 and 2010.
- This production dramatically outpaces the 4.6% historical and projected growth of peanut meal, a competing meal.

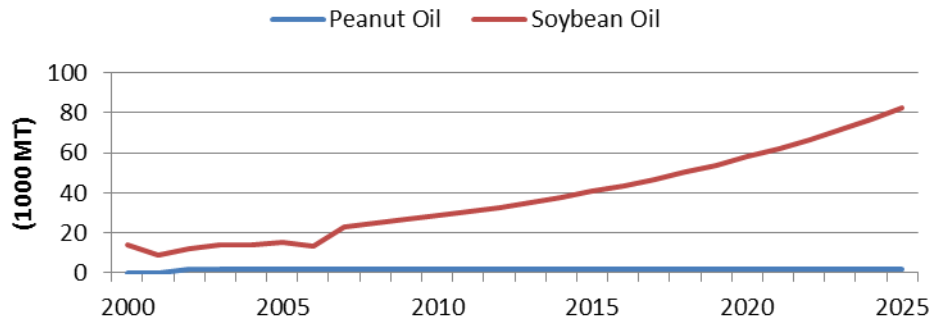
Zambia: Historical and Projected Production and Consumption (Cont'd)

Zambian Vegetable Oil Production



USDA FAS

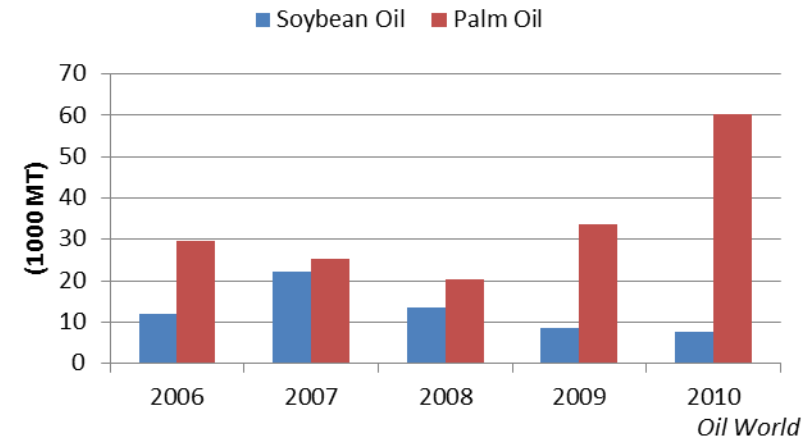
Zambian Vegetable Oil Consumption



USDA FAS

- USDA data regarding soybean oil production does not take into account all oil currently being produced.
- Soybean oil consumption is growing rapidly at a rate of just over 7%.
- However, consumption of competing peanut oil seems to have plateaued.

2010 Zambian Vegetable Oil Imports

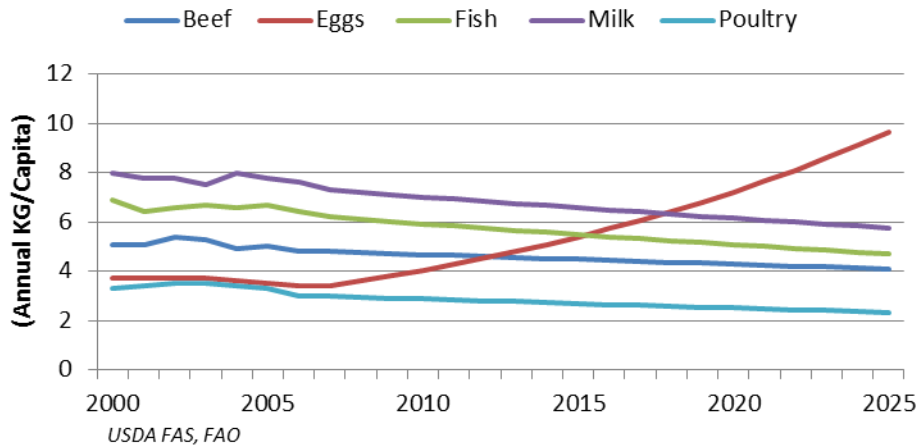


Oil World

- 2010 data indicates that although Zambia continues to import soybean oil to supplement domestic production, palm oil imports have been growing, and recently totaled 60,000 MT, compared to 7,500 MT soybean oil imports.

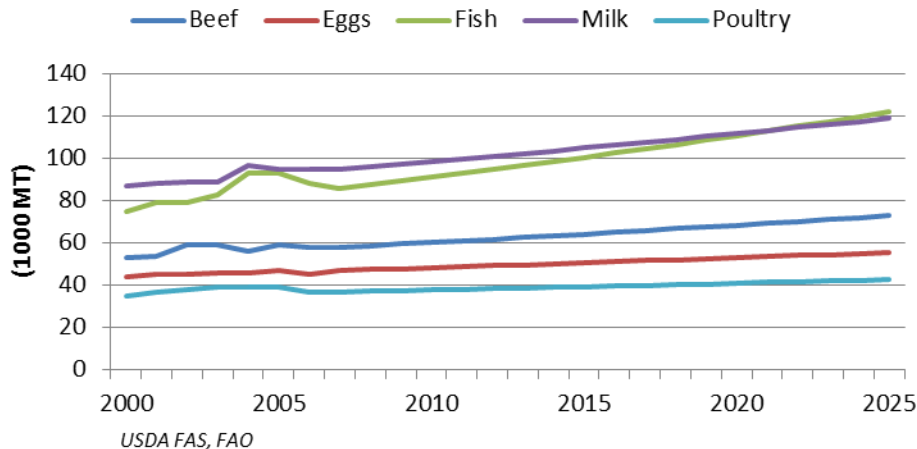
Zambia: Historical and Projected Production and Consumption (Cont'd)

Zambian Per Capita Animal Protein Consumption



- In spite of the fact that data shows Zambian per capita poultry consumption declining, overall poultry consumption is projected to increase.

Zambian Animal Protein Consumption



- Growth of the poultry industry is a primary driver behind increased demand for soybean meal.
- TechnoServe predicts growth of poultry consumption to be stronger than what FAO data projects: the organization anticipates almost 100,000 MT poultry demand by 2020, necessitating an even greater amount of soybean meal.

East Africa

- South Africa
- West Africa
 - Senegal
 - Ghana
 - Nigeria
- Southern Africa
 - Angola
 - Zimbabwe
 - Mozambique
 - Zambia
- East Africa
 - Kenya
 - Ethiopia
 - Tanzania

Kenya: Political Climate, International and Economic Affairs



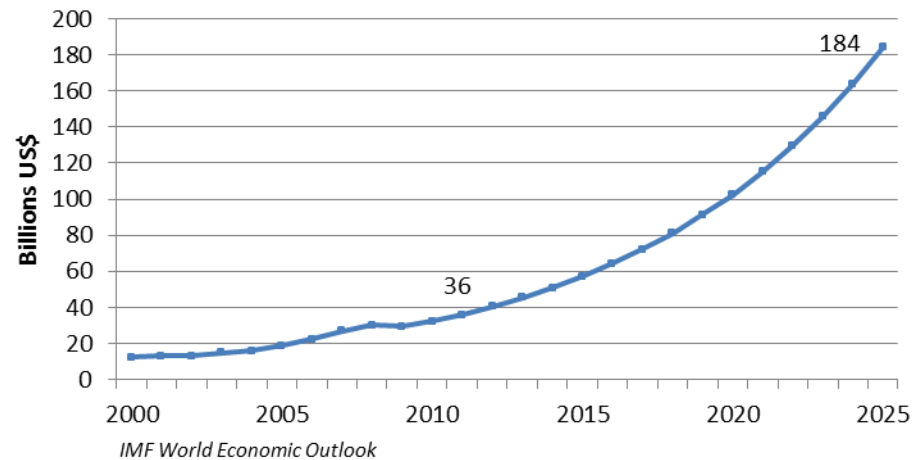
Economist Intelligence Unit

- Kenya’s president, Mwai Kibaki, represents the Party of National Unity.
- The country is transitioning to its new constitution, which was adopted in 2010, and whose changes included the creation of a Senate, Supreme Court, and Bill of Rights.
- As a member of the East African Community (EAC), Kenya plans to strengthen its ties with other members of this intergovernmental organization.
- Kenya’s good relationship with the United States, especially in terms of aid, may be jeopardized if corruption is not addressed. Kenya will likely try to strengthen its relations with China, India, and South Africa, viewing them as developing economies relevant to Kenyan interests.
- Although the Kenyan government has intentions of trade liberalization, it is likely that these will manifest first in agreements with EAC countries.

Kenya: Historical and Projected Population (1,000s)						
2000	2005	2010	2015	2020	2025	
31,254	35,615	40,513	46,332	52,564	59,054	

United Nations, *World Population Prospects: 2010 Revision*

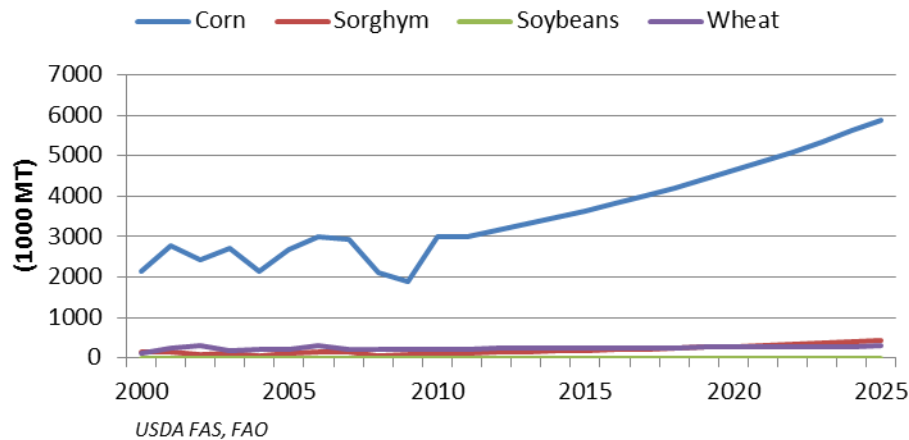
Kenya: Historical and Projected GDP



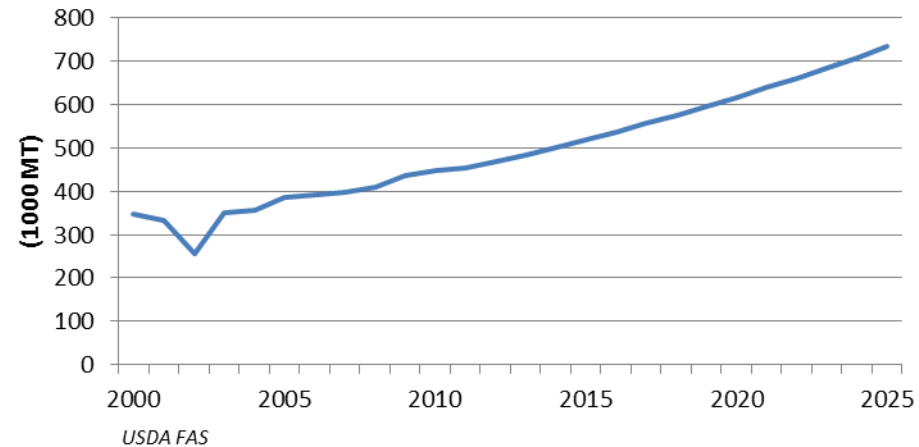
Between 2010 and 2025, a CAGR of 12.4% is projected.

Kenya: Historical and Projected Production and Consumption

Kenyan Crop Production



Kenyan Palm Oil Consumption

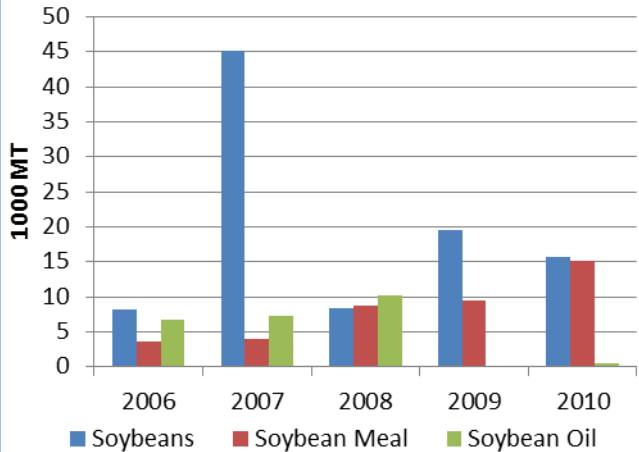


- The FAO has reported soybean production to be static at 2,000 MT per year since 2000, rendering a flat projection through 2025.
- Kenya’s Ministry of Agriculture data shows soy production has grown at an average rate of 10% since 2000. If this growth continues, soy production will be nearly 10,500 MT in 2025.
- Further illustrating the lack of consensus among production data, the Kenyan Agricultural Research Institute believes domestic production is greater, estimating that 7 commercial farmers alone raise 4,000 MT.
- Most soybean farmers in Kenya are smallholders.
- Increased soybean production in Kenya must be met with improved processing capacity and a more efficient marketplace.

- The USDA explains that Kenya is an importer of vegetable oils, especially palm oil, despite the potential to grow oilseeds domestically.
- The limited oil processing and refining capacity is predominately devoted to palm oil.
- HighQuest interviews indicate soybean oil is unpopular or unknown to consumers. Oil processors need the support of consumer knowledge about the product.

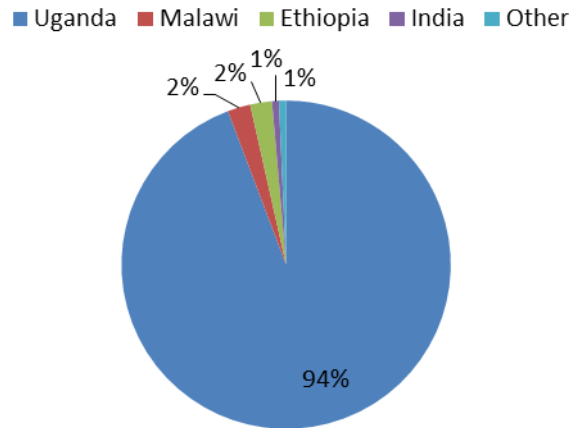
Kenya: Historical and Projected Production and Consumption II

Kenyan Soybean Complex Imports



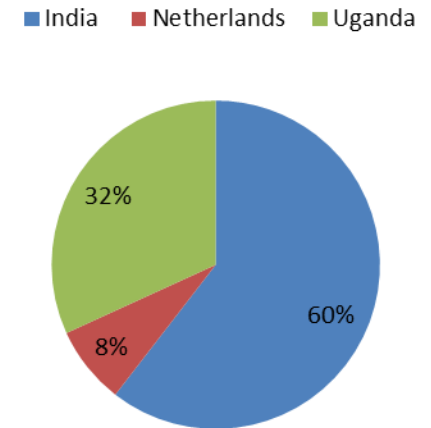
Global Trade Atlas

2010 Kenyan Soybean Imports



Global Trade Atlas

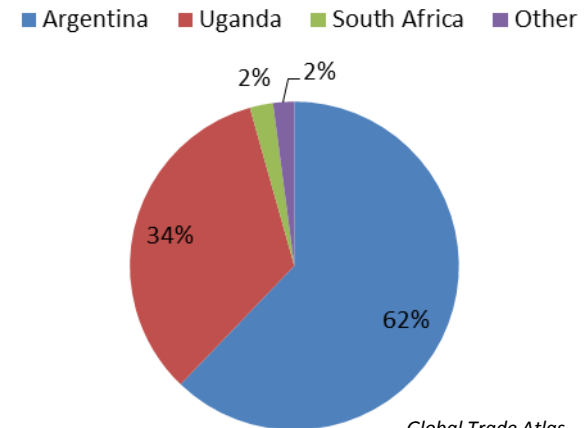
2010 Kenyan Soybean Meal Imports



Global Trade Atlas

- To understand 2010 Kenyan soybean complex imports, this study relies on Oil World data:
 - Soybeans: 15,778 MT imported primarily from Uganda
 - Soybean Meal: 15,092 MT mostly imported from India, a dramatic increase from 3,500 MT imports in 2006.
 - Soybean Oil: 482 MT largely imported from Argentina and Uganda
- Indian exports to East Africa are highly competitive and satisfy GMO-free requirements.
- Regional trade agreements facilitate trade within Sub-Saharan Africa, including Kenya's imports of soybean complex products.

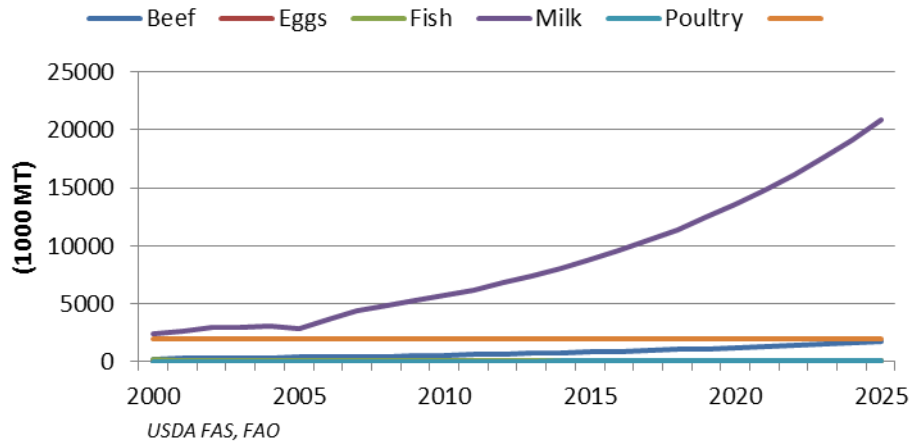
2010 Kenyan Soybean Oil Imports



Global Trade Atlas

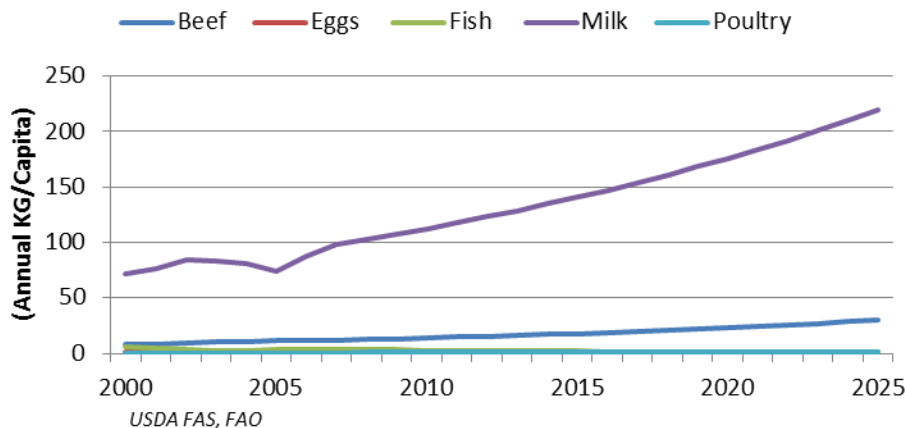
Kenya: Historical and Projected Production and Consumption III

Kenyan Animal Protein Consumption



- Kenya's Agricultural Research Institute estimates that 90% of the soybean market goes towards livestock feed, suggesting soybean meal, not edible oil, should be the priority of potential soybean exporters.

Kenyan Per Capita Animal Protein Consumption



Ethiopia: Political Climate, International and Economic Affairs



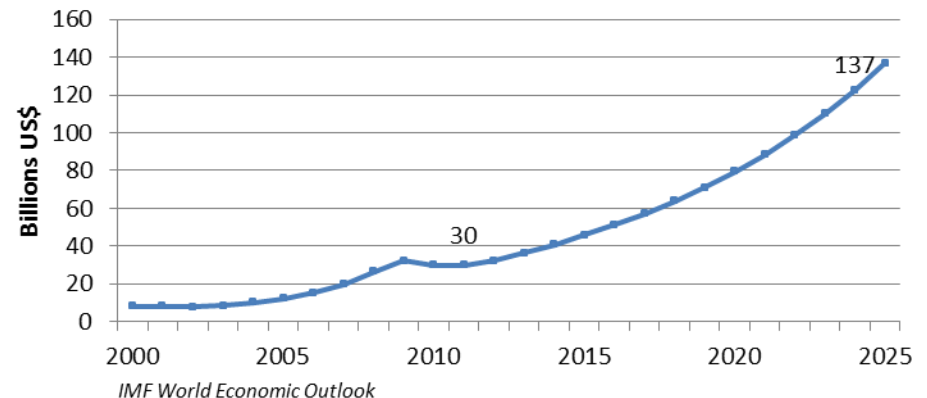
Economist Intelligence Unit

- Prime Minister Meles Zenawi, elected in May 2010, represents the Ethiopian People's Revolutionary Democratic Front (EPRDF).
- Water politics define much of Ethiopia's international affairs, and the construction of a dam on the Nile has strained relationships with downriver Sudan and Egypt.
- Ethiopia is especially interested in the emerging status of South Sudan, as it relies on Sudanese oil imports.
- Ethiopia recently enacted a Growth and Transformation plan.
 - A developing network of roads and better access to power has contributed to a gradual transition from subsistence to commercial agriculture.
- Inflation is the primary cause of slow economic growth.
- Logistical inefficiencies in transporting goods from ports (primarily in Djibouti and Kenya) have made prices for goods, including agricultural products, increase.
- Transport costs, coupled with the fact that government attempts to mitigate inflation by attaching price ceilings to goods, only exacerbate the issue of access to agricultural products, as importers refused to import goods at prices above market value.

Ethiopia: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
65,578	74,264	82,950	92,000	101,046	109,969

United Nations, *World Population Prospects: 2010 Revision*

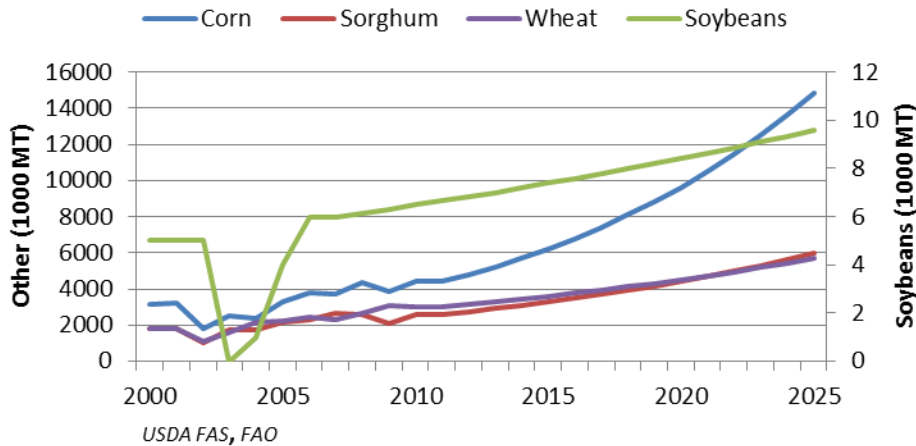
Ethiopia: Historical and Projected GDP



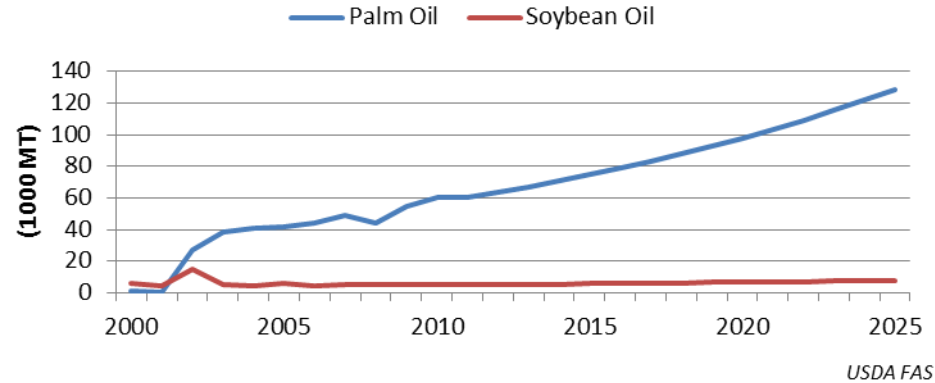
Between 2010 and 2025, a CAGR of 11.5% is predicted.

Ethiopia: Historical and Projected Production and Consumption

Ethiopian Crop Production



Ethiopian Vegetable Oil Consumption



- Regarding vegetable oil consumption, while palm oil consumption is projected to grow, soybean oil consumption will remain relatively static according to USDA data.
- However, development of the soybean value chain in Ethiopia may change this outlook.

Tanzania: Political Climate, International and Economic Affairs

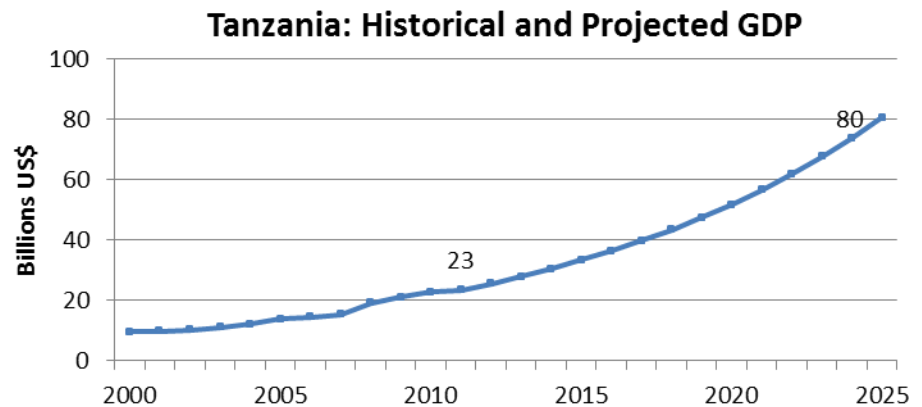


Economist Intelligence Unit

- President Jakaya Kikwete of the Chama Cha Mapinduzi (CCM) party leads Tanzania.
 - The CCM is defined by deep internal divisions and is threatened by an opposing party.
- A member of the East African Community (EAC), Tanzania has been resisting economic integration and this has incited frustration in other members.
- The recently instated Southern Agricultural Growth Corridor of Tanzania (SAGCOT) promises to help develop much needed logistical infrastructure that will facilitate not only marketing and transport of crops, but also the acquisition of important agricultural inputs.
- Limitations to GDP growth include transportation and electricity inadequacies as well as weather.
- Approximately 60% of Tanzanians have direct ties to agriculture.
- Land reform may help boost domestic productivity.
- Regarding international trade, gold continues to be important, comprising more than 30% of the country's overall trade.

Tanzania: Historical and Projected Population (1,000s)					
2000	2005	2010	2015	2020	2025
34,038	38,831	44,841	52,311	61,081	70,879

United Nations, *World Population Prospects: 2010 Revision*

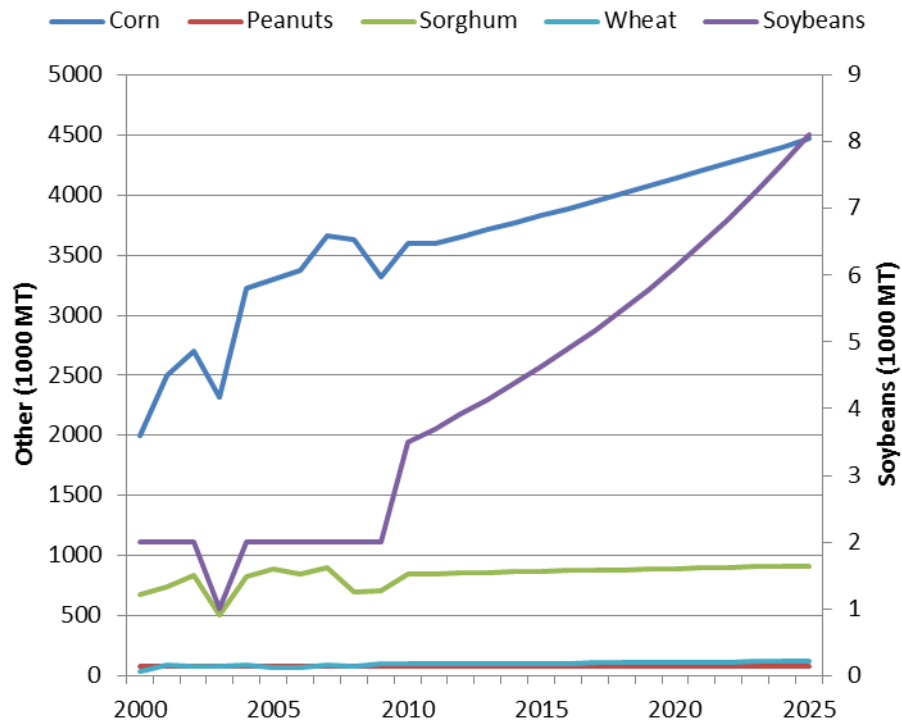


IMF World Economic Outlook

Between 2010 and 2025, a CAGR of 9.3% is projected.

Tanzania: Historical and Projected Production and Consumption

Tanzanian Crop Production

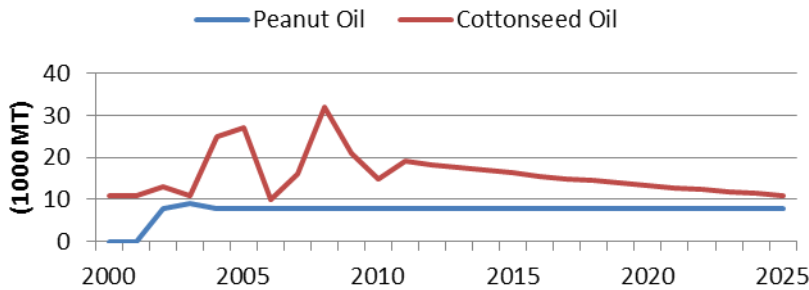


USDA FAS, FAO, Tanzania Ministry of Agriculture, Food Security and Cooperatives

- Wheat is a staple crop, with 3.6 million MT production in 2011, and production is projected to grow.
- Since 2000, the FAO reports that soybean production in Tanzania has been static at 2,000 MT per year.
- The Tanzanian government's most recent estimate of production was 3,500 MT. Given this production, an annual growth rate is projected of 5.8%.
- Tanzania's Soybean Development Strategy has the ambitious goal of maximizing soybean production in Tanzania and aims to raise production to 2 million MT by 2020.
- This Development Strategy not only plans to increase production, but also intends to develop domestic processing capacity – a complement to production, as producers need the guarantee of a market.
- Regardless of the success of the Development Strategy, demand for soybeans will continue to grow as soybean meal is added to livestock feeds and soybean meal and oil becomes more widely accepted for human consumption.

Tanzania: Historical and Projected Production and Consumption (Cont'd)

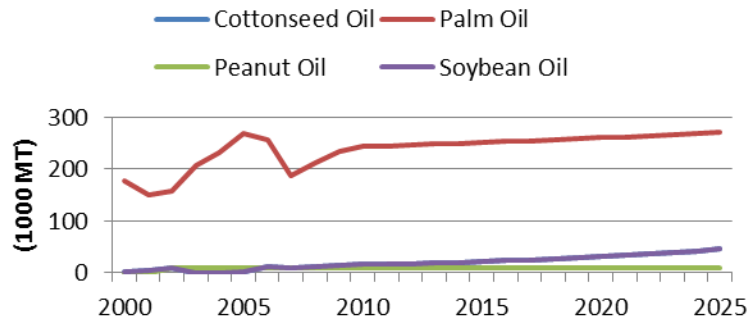
Tanzanian Vegetable Oil Production



USDA FAS

- USDA data indicates that Tanzanian production of peanut oil and cottonseed oil will decline and stabilize, respectively.

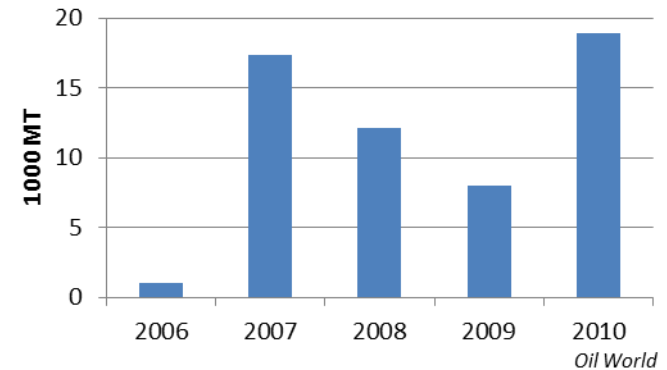
Tanzanian Vegetable Oil Consumption



USDA FAS

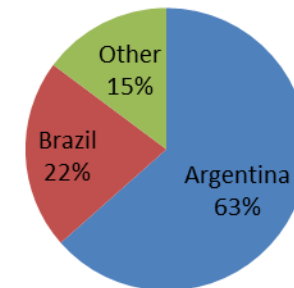
- While palm oil dominates domestic vegetable oils consumption, soybean oil consumption has been growing, and may be due to the success of the Tanzania Soybean Development Strategy.

Tanzanian Soybean Oil Imports



Oil World

2010 Tanzanian Soybean Oil Imports

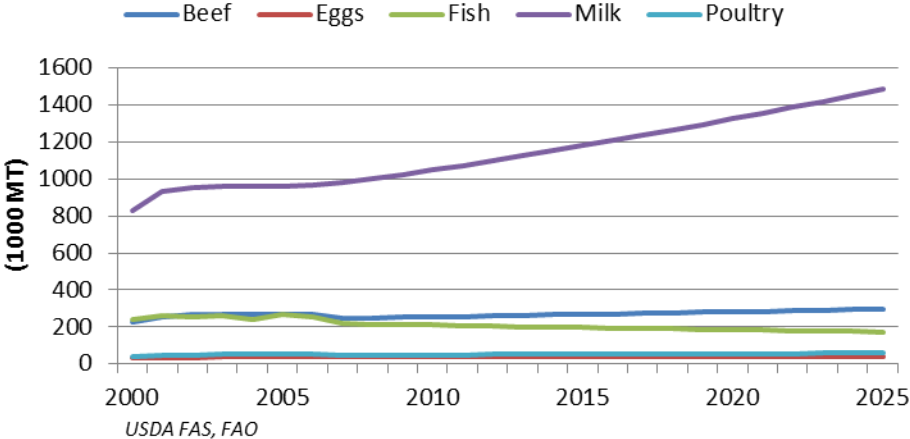


Oil World

- In 2010, 63% of Tanzania's 19,000 MT soybean oil imports were Argentine. Brazil followed, supplying 4,000 MT.

Tanzania: Historical and Projected Production and Consumption (Cont'd)

Tanzanian Animal Protein Consumption



- Projections based on historical USDA and FAO data indicate limited growth in animal protein consumption, with the exception of milk.

Tanzanian Per Capita Animal Protein Consumption

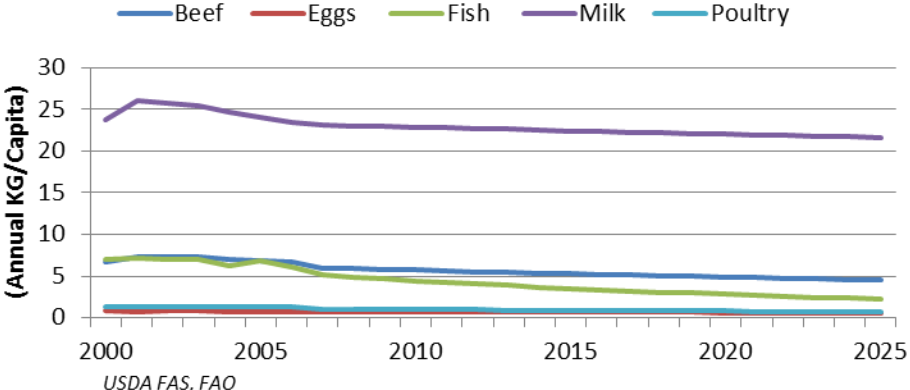
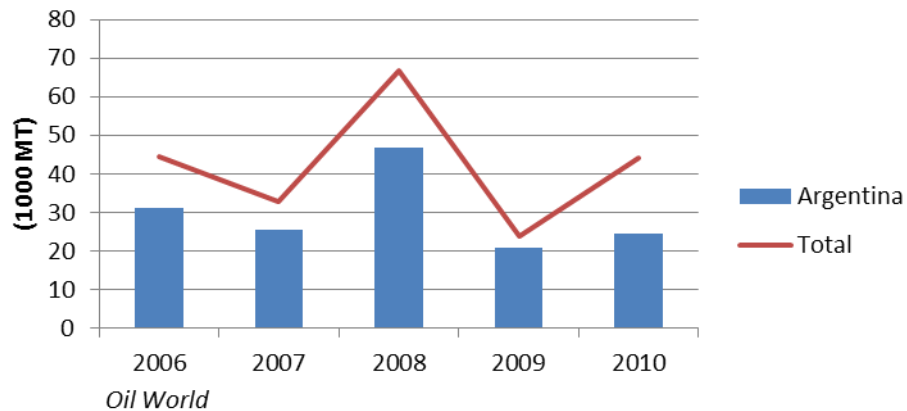


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- Selection Matrix: Results
- Country-Level Data and Analyses
- **Sub-Regional Trade Flows**

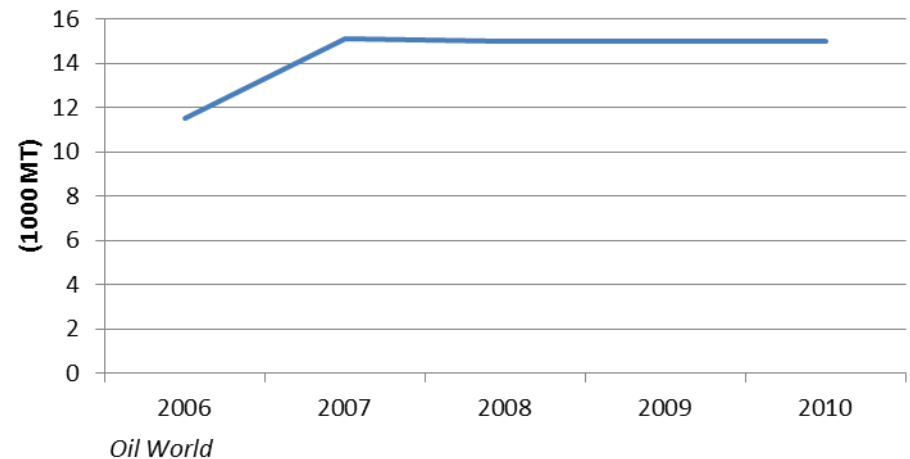
Sub-Regional Trade Flows: West Africa

West African Soybean Meal Imports – By Source Country



- West African countries' soybean meal imports primarily originate in Argentina.

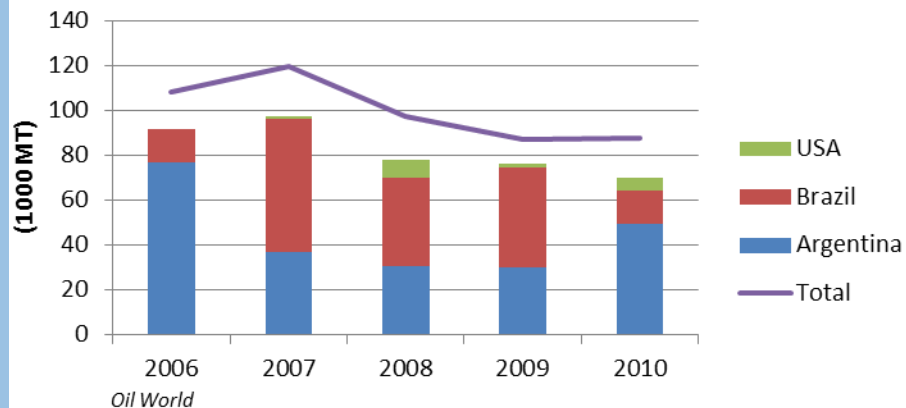
West African Soybean Exports



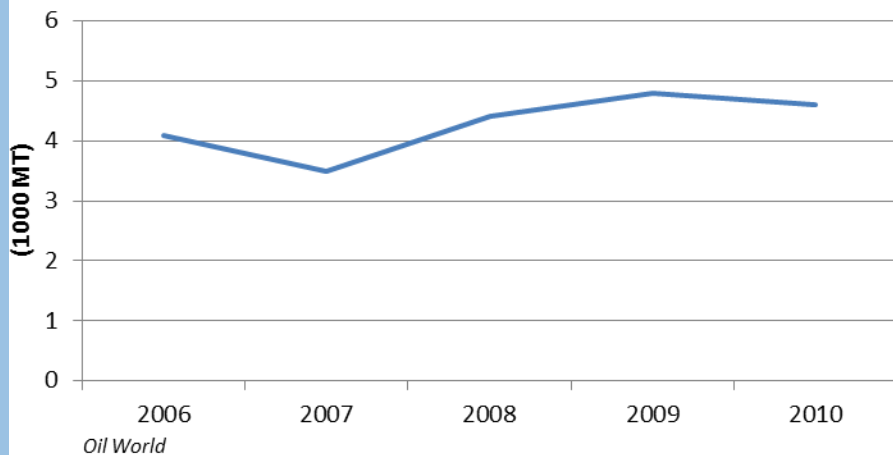
- The region's soybean exports have been relatively static, staying near 15,000 MT since 2007.

Sub-Regional Trade Flows: West Africa

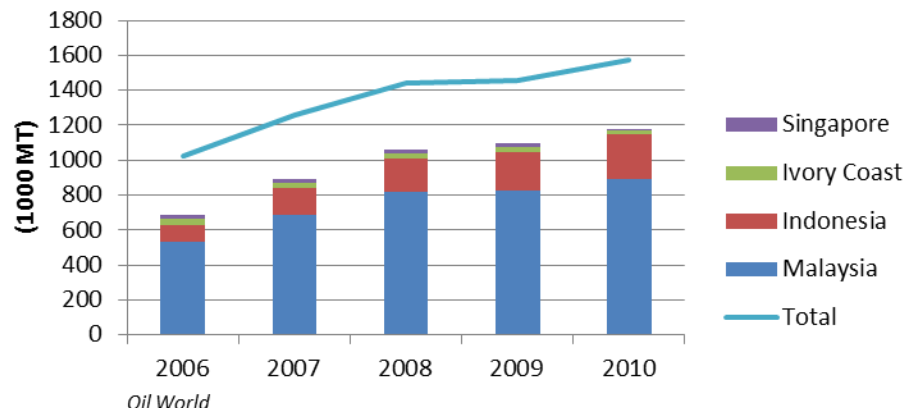
West African Soybean Oil Imports – By Source Countries



West African Sunflowerseed Oil Imports

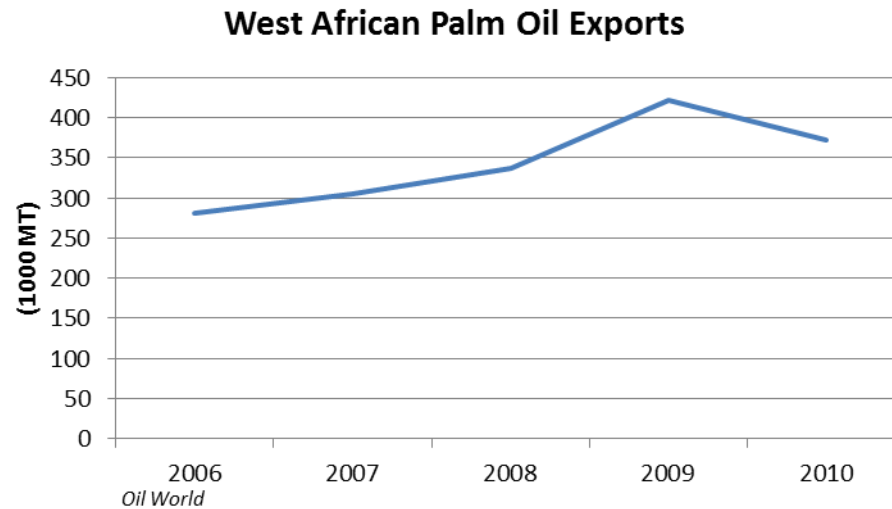


West African Palm Oil Imports – By Source Countries



- West African countries' soybean oil imports come primarily from Argentina.
- Compared to its presence in Southern and East African import markets, the US supplies the largest share of soybean oil imports in West Africa. This is explained by the relatively shorter distance between the US and West African ports compared to other sub-regions, and already established trade relationships.
- In 2010, the US exported 5,600 MT of soybean oil to the region, which accounted to 6.4% of total imports.
- West African palm oil imports, a substitute for soybean oil, originate in Southeast Asia and are significant totaling more than 1.5 million MT in 2010.
- Imports of sunflowerseed oil in West Africa are negligible.

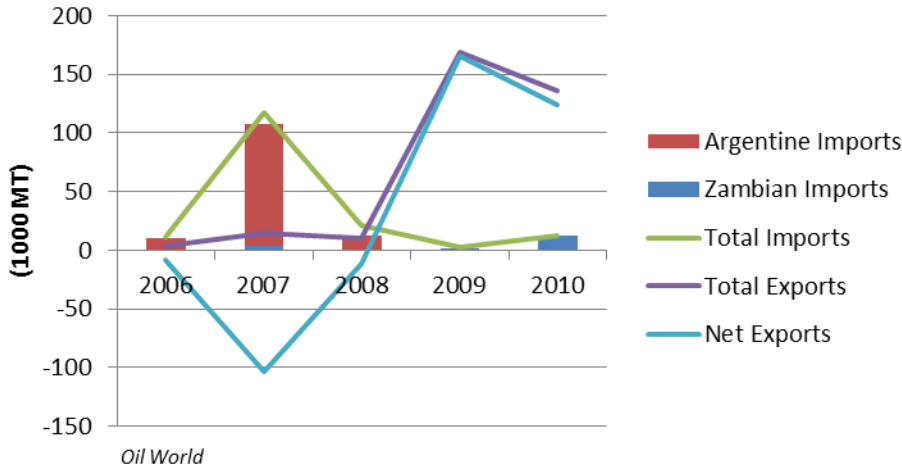
Sub-Regional Trade Flows: West Africa



- Not only does West Africa import significant quantities of palm oil, but the sub-region also produces and exports palm oil.
- West African palm oil exports totaled 372,000 MT in 2010, up from 280,000 MT in 2006, indicating the dominance of palm oil in the region.

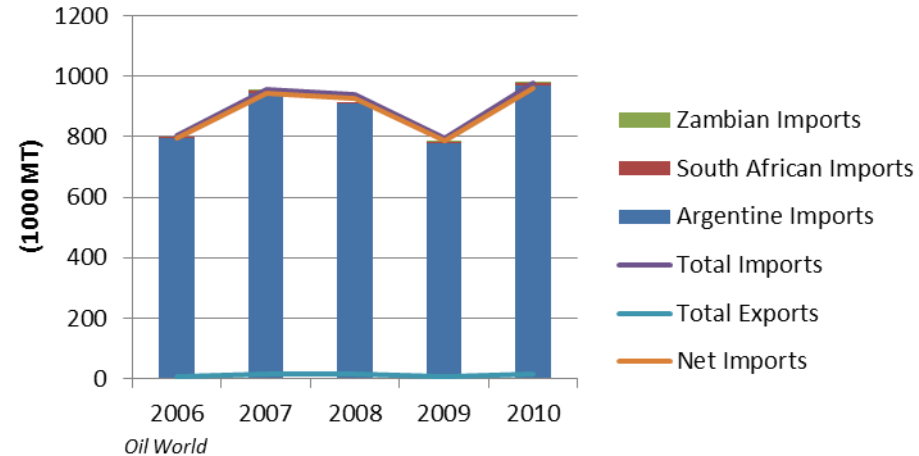
Sub-Regional Trade Flows: Southern Africa

Southern African Soybean Trade Balance



- Southern Africa includes Sub-Saharan Africa’s soybean production belt, and the sub-region is a net exporter of soybeans.
- Given increased soybean production in Southern Africa, soybean imports have dropped dramatically in recent years, and once significant Argentine imports have given way to smaller, intra-regionally sourced Zambian imports.

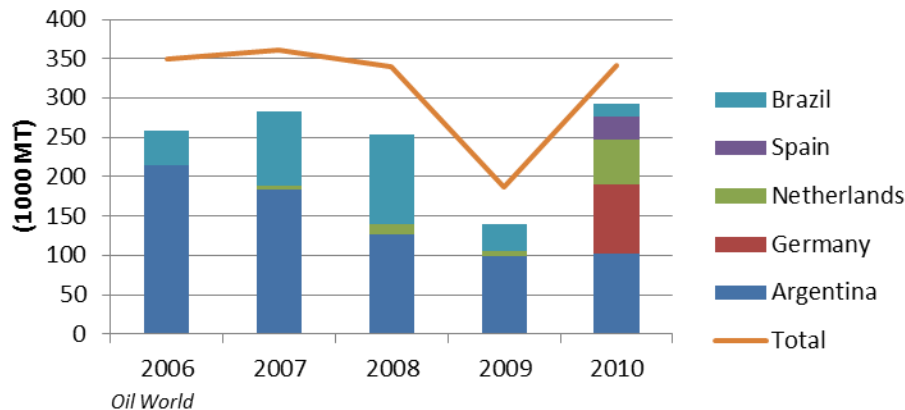
Southern African Soybean Meal Trade Balance



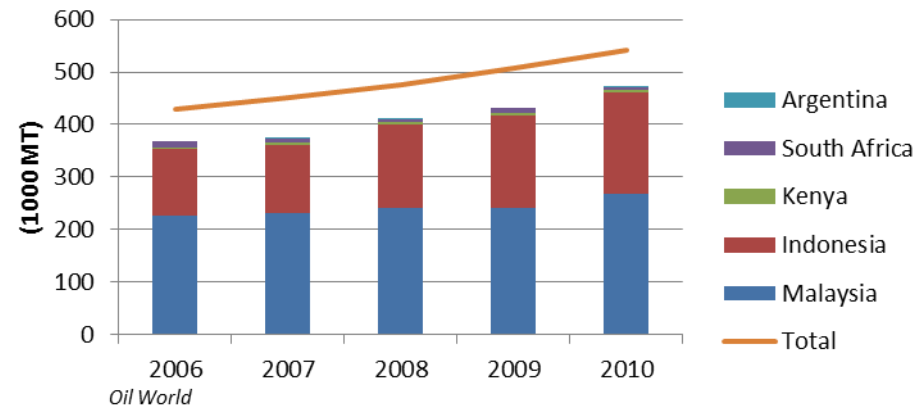
- Southern Africa is a net importer of soybean meal.
- Exports of soybean meal are extremely limited, totaling just under 17,000 MT, and was exported to countries within the region.
- Soybean meal imports are dominated by Argentine imports.

Sub-Regional Trade Flows: Southern Africa

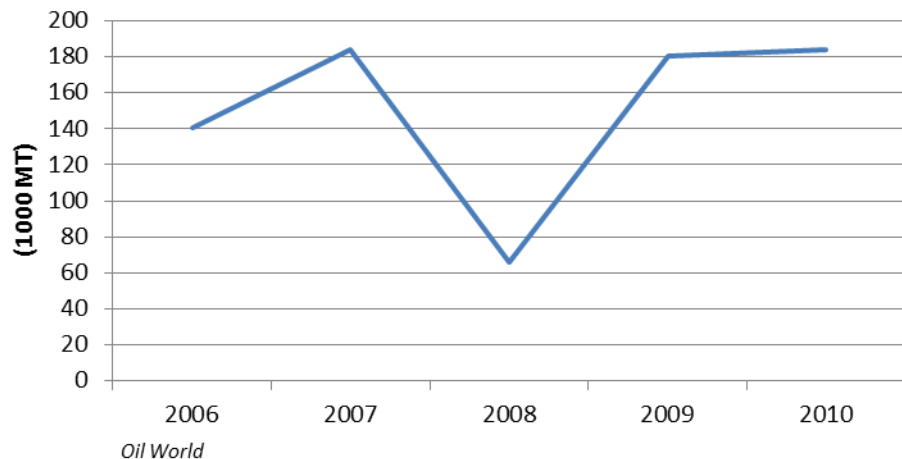
Southern African Soybean Oil Imports – Source Countries



Southern African Palm Oil Imports – Source Countries

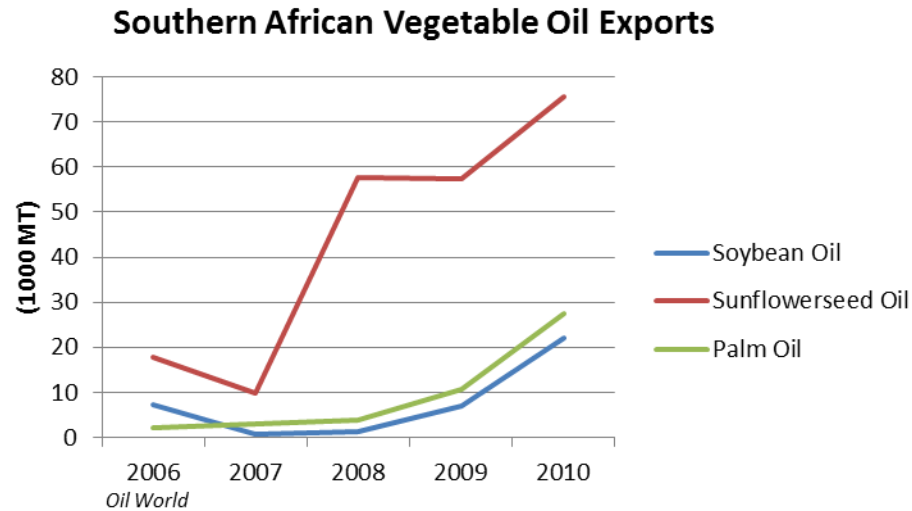


Southern African Sunflowerseed Oil Imports



- In Southern Africa, soybean oil primarily comes from Argentina and European countries including Germany and the Netherlands.
- Compared to West and East Africa, imports of soybean oil are not dramatically lower than import of palm oil – palm oil imports exceeded soybean oil imports by about 200,000 MT. This indicates the commodity is viewed as a more comparable oil than in other regions of sub-Saharan Africa.
- Sunflowerseed oil imports in Southern Africa are significant, and totaled more than 180,000 MT in 2010. South Africa is a major producer of sunflowerseed oil, helping to generate sub-regional demand, and the oil is used as a substitute for soybean oil in the Southern African market.

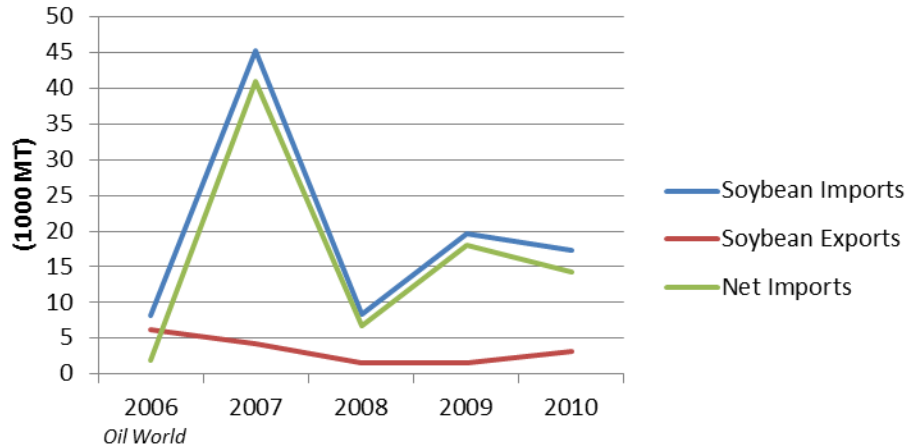
Sub-Regional Trade Flows: Southern Africa



- In sharp contrast to the case of East and Central Africa, Southern African oil exports are dominated by sunflowerseed oil.
- Soybean oil exportation appears to be on the rise, and is closely following the growth of palm oil exports.

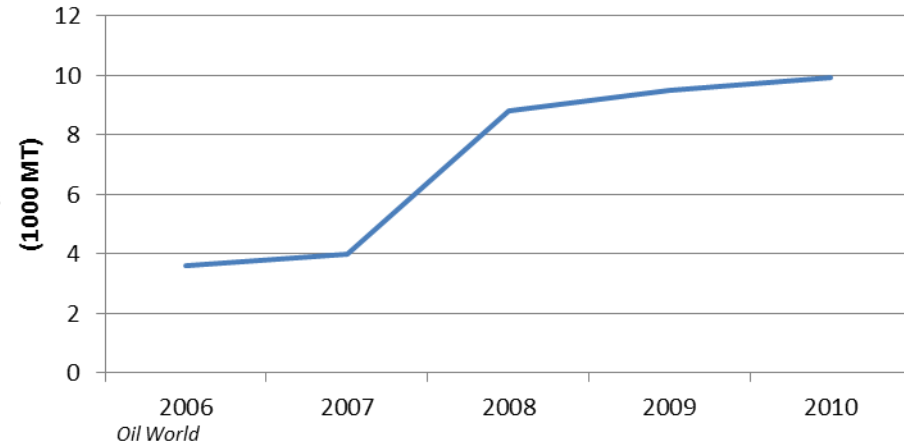
Sub-Regional Trade Flows: East Africa

Southern African Soybean Trade Balance



- The East Africa sub-region is a net importer of soybeans.
- Soybean production in the region is expected to expand, especially with the entrance of foreign firms planning to expand production and processing capacities.

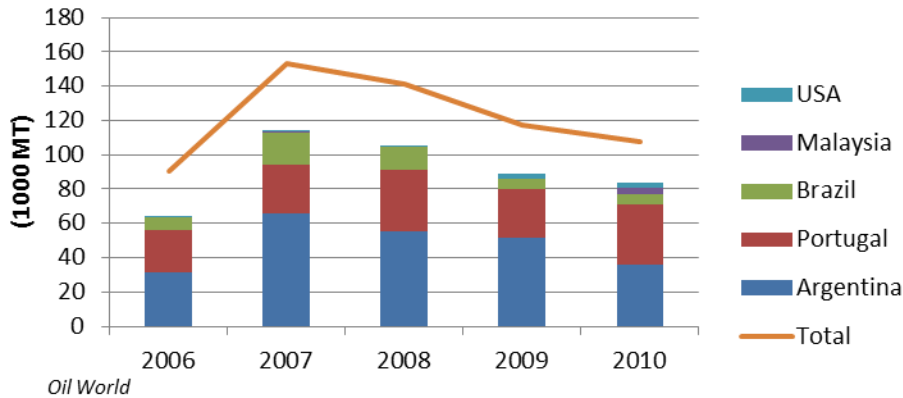
Soybean Meal Imports



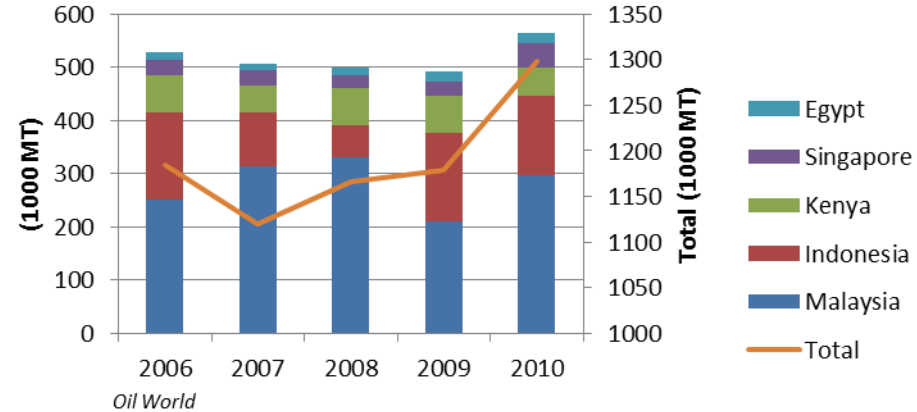
- Data is only available for Kenya.
- Oil World data indicates sub-regional soybean meal imports are increasing, and totaled just under 10,000 MT in 2010.
- HighQuest interviews with importers indicate this number to be currently in excess of 20,000 MT.

Sub-Regional Trade Flows: East Africa

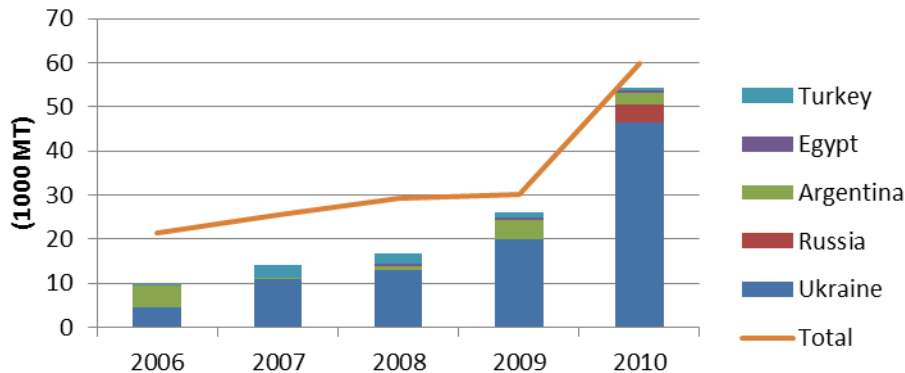
East African Soybean Oil Imports – Source Countries



East African Palm Oil Imports – Source Countries

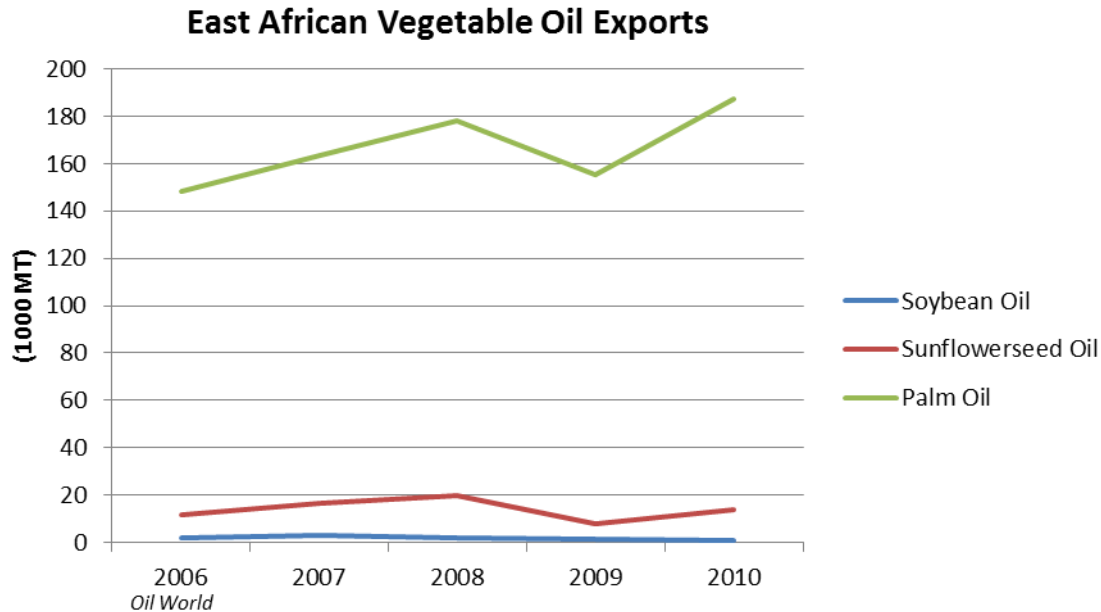


East African Sunflowerseed Oil Imports – Source Countries



- Soybean oil imports are primarily sourced from Argentina and Portugal.
- Palm oil imports dramatically outpace the imports of other oils, and the region imported nearly 1.3 million MT of palm oil in 2010, compared with 107,000 MT of soybean oil and 60,000 MT of sunflowerseed oil during the same period.

Sub-Regional Trade Flows: East Africa



- Indicative of regional production, East Africa exported 187,000 MT of palm oil in 2010.
- In the same period, roughly 14,000 MT of sunflowerseed oil and nearly 1,000 MT of soybean oil were exported.
- HighQuest interviews with East African Oil refiners revealed consumers are hesitant to use soybean oil because of the oil's smell and because of traditional vegetable oil purchasing and use patterns.