Voluntary _ Public

Date: 6/3/2014
GAIN Report Number:

Nigeria

Nigeria Provides Export Market for Oilseeds and Products

Report Categories:
Oilseeds and Products

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Report Highlights:
Production of oilseeds and products is trending upwards in Nigeria but domestic supply still lags behind growing demand. Demand is growing from both the poultry and the food processing industries. Palm oil/palm kernel oil and soybean oil are the dominant supply sources contributing approximately 70 percent and 25 percent of the country's National Consumption Requirement (NCR), respectively. According to industry sources, local production reached 1.8 million tons per year, about 600,000 tons (about 25 percent) short of the NCR in 2013. Imports of crude vegetable oil were liberalized in 2008 but retail packed vegetable oil remains banned. Local processors now import crude vegetable oil to refine and fill the supply deficit. Opportunity abounds in Nigeria for U.S. exporters of oilseeds and products with other vegetable oil processing ingredients and additives.

Post: Lagos

Executive Summary

Oilseeds and products in Nigeria comprised of palm oil/palm kernel, soybean oil, and other oils contributing 70 percent, 25 percent, and 5 percent, respectively, to total domestic vegetable oil supply. Others include: peanut, cottonseed, coconut/copra, sesame seeds, rapeseeds, mustard seeds, castor seed, sunflower seed, linseed, etc. Local production, estimated at 1.8 million tons, has failed to pace with rising demand as the country's NCR reaches 2.4 million tons (industry source). The 600,000 ton (about 25 percent) difference is met by imports.

The Government of Nigeria (GON) removed the import ban on bulk crude vegetable oil in 2008 and imports have continued to rise every year. However, imports of all vegetable oil in retail packs remain banned. Palm and soybean oils are produced in Nigeria, and while the country has the potential to become self-sufficient producing them, palm and palm kernel oils are still imported from Indonesia, Malaysia, Cote D'Ivoire and Benin.

The GON initiated the Agriculture Transformation Agenda (ATA) program in 2012. The overall objective was to increase agricultural production in order to increase domestic food production and generate employment. Under the ATA, the GON aims to increase palm tree plantations and productivity in the country by collaborating with farmers and other private sector stakeholders to distribute hybrid seedlings to farmers in order to replace the low-yielding and old trees. Although there have been some increases, the production deficit remains high at about 600,000 tons a year and imports satisfy the local demand.

Palm oil is used in Nigeria for food and non-food consumption. There are four major palm oil products marketed in Nigeria and they include:

1. The low quality oil namely Technical Palm Oil (TPO), which is sold as unprocessed oil for traditional use, meaning essentially consumed by household;
2. The high quality oil called Special Palm Oil (SPO), produced by large mills and used by industries, usually refined;
3. The Palm Kernel Oil (PKO) derived from the kernel of the fruit and used by industries; and,
4. The Refined Bleached Deodorized Oil (RBD), which is refined oil from which colors and smells are removed.

Soybean meal remains a vital and preferred source of protein in compound feed by the Nigerian poultry industry. Soybeans are crushed to obtain oil for food and non-food uses and the left-over (soybean meal/cakes) is utilized for animal feed production. There is therefore an increasing investment in oilseed crushing/processing which is expected to grow at an annual average of ten percent in the next five years.

Demand for "low and cholesterol free" vegetable oil product is increasing. Small-scale oil seed crushing facilities have been established to meet increasing demand for both soybean oil and its cakes/meal over the last 10 years. Grand Cereal & Oils Ltd and Affcott Ltd are the major local processors producing approximately 60 percent and 20 percent respectively. The major producers have also reported a rise in demand for soybean oil as Nigerians become more familiar with the higher quality and health benefits of soybean oil. Favorable grower prices and sustained high demand for soy meal by the poultry sector also account for the rising demand. Despite this, crushers are operating

below capacity and are unable to satisfy the growing demand for soybean meal and oil resulting in the annual supply shortfall.

Nigeria offers growing market opportunities for U.S. exporters of oilseed and products, including value-added oilseed processing ingredients and additives. Local processors of edible vegetable oil also seek higher quality flavors, nutrients and processing agents to produce for export and domestic markets.

Palm Oil

Production

Nigeria's palm oil production increased 2 percent to 930,000 tons in 2013, from 910,000 tons in MY2012/2013. Production figure is forecast at 940,000 tons during MY2014/2015. According to GON sources, policies of the GON's Agricultural Transformation Agenda (ATA) have assisted with increasing palm tree plantations and productivity in the country. Subsidized hybrid seedlings have also been distributed to farmers to replace the low-yielding and old trees. Although Nigeria's palm oil production has shown some response, production deficit remains high at about 600,000 tons per annum. As a result, the country imports palm oil to satisfy local demand.

In Nigeria, palm trees grow up in wet rain forests and in the savannah, mainly in the South-East, Niger Delta, and Central zones, producing palm oil and providing direct employment and income to about 4 million persons engaged in palm oil processing and marketing. The country has the potential to increase palm oil production through the application of improved processing methods and better marketing. However, sizes of plantations are small at 5 hectares on average and few large-scale operations exist. The production system also remains focused on semi-natural groves. Yields per hectare from wild harvest are also less than 2 tons of fresh fruit bunches (FFB) per hectare, about three times less than yields from improved seedlings. These pose major constraints to increasing palm oil productivity and impede competitiveness in that sector.

Dura, Pisifera and Tenera are the major oil palms in Nigeria. Tenera is a crossbreed between Dura and Pisifera and yields about three times more oil than the equivalent fruit weight of Dura. The Nigerian Institute for Oil Palm Research (NIFOR) is Nigeria's research and development center for oil palm and produces most oil palm seeds for the country.

Consumption

Nigeria consumes 1.730 million tons of palm oil and palm kernel oil (sharing about 80 percent and 20 percent, respectively) per year. This represents about 70 percent of the NCR for oilseed/vegetable oil.

Analysts indicate that much of the palm oil imports by Benin eventually enter Nigeria. Trade records show that Benin imports 470,000 tons of palm oil per annum of crude palm oil (CPO) and exports approximately 390,000 tons of palm oil per year. The technical palm oil (TPO) produced in-house in Nigeria has a generally preferred flavor which is lacking in imported palm oil. The demand for special palm oil (SPO) has been on the increase in Nigeria. SPO is TPO that is further refined and bleached, to cater to the needs of industrial processors.

Palm oil can be used for food and non-food purposes as shown in the table below:

Food and Non-Food Uses of Palm Oil

Food Uses	Non-Food Uses
Cooking Oil; Deep Frying Oils; Margarines & Spreads; Bakery Fats; Cocoa Butter Alternative Fats; Confectionery Fats; Ice Cream Fats; Infants Nutrition Fats; Other Food Application; etc.	Cosmetics & Personal Care; Soaps; Candles; Pharmaceuticals; Lubrications & Grease; Surfactants; Industrial Chemicals; Agrochemicals; Coatings; Paints & Lacquers; Electronics; Leather; Biodiesel; etc.

Consumption for food uses represents average 80 percent of total domestic consumption against 20 percent for non-food purposes. About 90 percent of palm oil for food uses is also consumed by food industry/processors. Foods like noodles, vegetable oil, biscuits, chips, margarines, shortenings, cereals, baked stuff, etc. survive on palm oil. The noodle industry alone consumes more than 80,000 tons of imported palm oil because the leading domestic palm oil producers fail to meet their demand. Owing to insufficient domestic supplies, noodle manufacturers are also increasingly entering into strategic alliances for investing into oil palm plantations in order to increase their palm oil supply.

Trade

Nigeria is a net importer of palm oil. Imports represent approximately 40 percent of the total domestic supply. Domestic supply continued to grow faster than production due mainly to import growth. Palm oil imports are reported to have increased at an average of 25 percent over the past 10 years. About 50 percent of imports are from Cote d'Ivoire—imports from the neighboring West African countries are significant but a large part of the imports are informal and not captured by official statistics. Figures for palm oil imports for Ghana, Togo and Benin are not realistic and far above these countries local demand requirement, and more than 80 percent of their imports are usually re-exported to Nigeria through informal trade channels. These imports are usually refined further to match the input needs of food processors and non-food industrial manufacturers.

Exports are insignificant and often not recorded. The local prices in the retail market are alternatively lower and higher than the border prices. Duty on imported palm oil is 35 percent but when levies and taxes are added, the total tariff can exceed 50 percent. With high transportation costs from the clearance ports to internal markets, local palm oil is able to compete with those imported. Without this protection, local prices would be much higher than those of imported palm oil.

At the local level, there are significant price differentials among the producing and non-producing regions due largely to cost differences arising from distribution. However, the average price per ton is $1,500, but prices at certain times of the year can differ from $1,000 to $2,000 per ton between the producing and the non-producing areas.

The rising income-levels among Asian countries is putting pressure on palm oil as these countries have increasing demand for packaged foods which have a higher content of palm oil. Palm oil also serves as

fuel for biomass plants. By the year 2020 it will become mandatory in the EU countries for 20 percent of energy and 10 percent of transport fuel to be derived from renewable sources of energy, which will promote oil palm utilization for energy purposes.

Policy

The GON's policy objective related to palm oil is to meet the domestic demand while reducing imports. It also seeks to make Nigeria's palm oil sector more competitive on the international market. In order to achieve these goals, the GON began to pursue national policies that encourage the involvement of private sector in boosting palm oil production since 2003. The market was also liberalized and national palm oil schemes established by state governments were privatized and bought by multinational and private investors.

In 2005, a 50 percent import duty was applied on imported palm oil. This was reduced to 35 percent duty in 2008. However, an array of fees and taxes were also introduced in 2009 resulting in an increase in the reference price of about 50 percent or more as shown in table below:

Import Fees/Taxes on Palm Oil

Import Duty	35%
Tax	7% of Import Duty
Surcharge	1% of FOB
CISS Fee*	0.5% of CIF
ECOWAS Charge	5% of CIF and all charges
VAT	2.50% of CIF plus VAT

***Comprehensive Import Supervision Scheme**

In 2012, the GON initiated Agricultural Transformation Agenda (ATA) for increasing palm oil production in the country. Government sources indicate that the GON has distributed hybrid seedlings to farmers to replace the low-yielding and old trees and is collaborating with farmers and private sector organizations to expand palm plantations. Some production increases have been recorded from this GON initiative.

The government also supports domestic production through research. The Nigerian Institute for Palm Oil Research (NIFOR) was set up to support the palm oil production and it has been under the control of the Federal Ministry of Agriculture since 1992. The current formal mandate of NIFOR is to conduct research on production of palm oil and other palm plant and to transfer the research outputs to producers, especially the traditional small-scale processors. (For further information about NIFOR, please visit: http://nifor.org/)

These measures and incentives would have allowed local production to compete with import but it did not due to market inefficiencies on the part of producers. Limited funding also hampers the institutes' ability to promote and deliver its products and research efforts. Research activities are limited and often inconclusive. Privatization is also constrained by the inefficient land tenure system and laws which prevent large scale investments.

Marketing

There is no record of Palm oil product exports from U.S. suppliers to Nigeria. Palm oil and Palm kernel oil are marketed through a network of local distribution channel members including the following four categories of wholesale traders in the value chain:

1. **Community palm oil dealer association:** They purchase palm oil in bulk from plantation estates in plastic containers, drums and tanks of different sizes on a regular basis.
2. **Peddlers:** They buy crude palm oil from farmers and millers and sell it to oil dealers, getting a commission. They are organized in union or association to create a barrier between smallholders and dealers.
3. **Oil merchants:** They source oil from local traders and middlemen and they bulk-buy in drums to deliver it to the Northern states**.** They have their own distribution stores and benefit from a wide network of retailers, wholesalers and industrial markets.
4. **Speculators:** They purchase palm oil during the high supply period and store it in order to send it later to major dealers during the period of scarcity. Sometimes, farmers store oil themselves.

With regards to margins distribution within the value chain from seed production to distribution, agents who are receiving the largest benefits are the producers and the millers. Wholesalers are not included in the following figure. Village agents, oil peddlers and oil dealers are in charge of the distribution. Margins corresponding to seeds production are negative, since this activity is financed by public funds i.e. NIFOR.

Retail sales can take place in road sides, local/periodic market centers and stands as well as wholesale outlets. Each retail point is characterized by activities of trading associations. The retail market is also restricted by private sector agents listed above as it does not allow free entry into the business. Indeed, distributors have to be registered by paying a large amount of money to the associations. The members fix the price of palm oil.

Production, Supply and Demand Data Statistics:

Oil, Palm Nigeria	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Oct 2012		Market Year Begin: Oct 2013		Market Year Begin: May 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	0	0	0	0	0
Area Harvested	2,500	2,500	2,500	2,530	2,500	2,510
Trees	0	0	0	0	0	0
Beginning Stocks	85	85	72	72	79	79
Production	910	910	930	930	930	940
MY Imports	470	470	500	500	525	525
MY Imp. from U.S.	0	0	0	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	1,465	1,465	1,502	1,502	1,534	1,544
MY Exports	18	18	18	18	18	18
MY Exp. to EU	0	0	0	0	0	0
Industrial Dom. Cons.	245	245	265	265	270	280
Food Use Dom. Cons.	1,130	1,130	1,140	1,140	1,160	1,160
Feed Waste Dom. Cons.	0		0	0	0	0
Total Dom. Cons.	1,375	1,375	1,405	1,405	1,430	1,440
Ending Stocks	72	72	79	79	86	86
Total Distribution	1,465	1,465	1,502	1,502	1,534	1,544
1000 HA, 1000 TREES, 1000 MT						

Oil, Palm Kernel Nigeria	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Jan 2013		Market Year Begin: Jan 2013		Market Year Begin: May 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush	700	700	725	725	725	730
Extr. Rate, 999.9999	0	0	0	0	0	0
Beginning Stocks	5	5	4	4	3	3
Production	315	315	330	330	330	340
MY Imports	0	0	0	0	0	0
MY Imp. from U.S.	0	0	0	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	320	320	334	334	333	343
MY Exports	5	5	5	5	5	5
MY Exp. to EU	0	0	0	0	0	0
Industrial Dom. Cons.	86	86	96	96	95	100
Food Use Dom. Cons.	225	225	230	230	233	238
Feed Waste Dom. Cons.	0	0	0	0	0	0
Total Dom. Cons.	311	311	326	326	328	338
Ending Stocks	4	4	3	3	0	
Total Distribution	320	320	334	334	333	343
1000 MT, PERCENT						

Soybean Oil

Production

Nigeria's soybean production grew to 450,000 tons during MY2012/2013 and MY2013/2014. Post anticipates the production would drop to 420,000 tons by MY2014/2015. Crushing is also expected to slide 20 percent from 228,000 tons in MY2012/2013 to 190,000 tons during MY2014/2015.

Soybean meal also remains a vital and preferred source of protein in compound feed by the Nigerian poultry industry. A hike in soybean production and processing was spurred by favorable grower prices and sustained high demand for soy meal by the poultry sector especially since poultry import ban in 2006. The ban on poultry imports resulted in high demand for poultry feed in Nigeria. Growth in demand for human consumption—mainly in breakfast and baby foods, mixed with traditional foods such as "garri"(dough usually eaten with soup as a full meal) to boost protein content and as a substitute for meat and fish in the form of soy cheese (tofu) is also an important driver of demand. The demand for soybean oil as a preferred choice of vegetable oil has also shown significant growth during the period. Rainfall was favorable both in terms of volume and distribution in 2013. Also, acreage increased because of the prevailing attractive prices.

Production is expected to decline due mainly to the escalating Boko Haram (BH) insurgency and the increasing ethnic/religious crisis between migrant cattlemen and local farmers in most of the soybean-growing region of northern Nigeria. Nigerian soybean processors also face substantial challenges to economic viability, including the lack of reliable scale volumes of good-quality soybeans, outdated technology with a lack of available finance to upgrade production capital, and high energy and transportation costs.

Higher production is constrained by low yield levels resulting from the high cost of seeds and scarcity of superphosphate fertilizers. Average yield levels are approximately 1.2 tons per hectare. Soybeans are produced on smallholder farms averaging no more than one hectare and operation not mechanized as a

result. In Nigeria soybean cultivation starts in May/June while land clearing and harvesting normally occurs in late October through November every year. The crop is harvested 3-4 months after planting, depending on the time of sowing and seed variety. Benue State is the dominant soybean producing area but several other states, such as Kaduna, Plateau, and Nasarawa are increasing production.

Soybean oil contributed about 20 percent to Nigeria's NCR of 2.4 million tons for oilseed/vegetable oil (450,000 tons) in 2013. Nigeria's installed annual soybean crushing capacity was estimated at approximately 610,000 MT while raw soybeans production estimated at 450 tons that year. An estimated 228,000 tons of soybeans were crushed in MY2012/13, representing about 40 percent of installed processing capacity. Soybean crushing declined to 200,000 tons in MY2013/2014 and is expected to drop to 190,000 tons in MY2014/2015 on account of declining production and scarcity/high-cost of soybean. Eight large processors account for nearly 60 percent of Nigeria's soybean crushing industry. Generally, Nigerian soybean crushers are operating at 60 percent below capacity and are also unable to satisfy the growing demand for soybean meal and oil.

Consumption

At present, soybean oil is a major complement to palm oil in the domestic supply equation for edible vegetable oils and the major producers have reported a rise in demand for soybean oil as Nigerians become more familiar with the higher quality and health benefits of soybean oil. Although palm and soybean oil are produced in Nigeria, domestic production of these vegetable oils have not kept pace with rising demand. Total domestic consumption is about 450,000 tons (about 20 percent of Nigeria's NCR) in 2013.

Soybean meal is the dominant and preferred protein ingredient in poultry feed rations. In ideal situations, poultry producers would prefer soybean meal inclusion rate of 30 percent in compound their feed, but the scarcity and high cost of the product have forced them to reformulate in favor of low quality substitutes such as peanut cake, cottonseed, and palm kernel meal. Leading infant food manufacturers in the country use soybeans because of its high nutritional value. Soybeans are also processed into flour and soybean oil is used in the local paint, cosmetics, and soap making industries. Direct human consumption of soybeans is also significant in Nigeria, especially among rural low-income groups that cannot really afford animal protein sources such as meat, fish and eggs.

Beginning in the early 1990s, the International Institute of Tropical Agriculture (IITA) promoted the use of protein-rich soybeans in everyday foods to curb malnutrition. IITA estimates the cost of protein, when purchased as soybeans, to be only about 10 – 20 percent of the cost of protein from meat, eggs, fish or milk. Soybeans are now widely consumed and are readily used in the production of soymilk, soy cake, soy yogurt and the fortification of local carbohydrate-based Nigerian food staples. Dawadawa, a local food seasoning, is also produced from soybeans. Government sources estimate that about 41 percent of Nigeria's domestic production is consumed directly in rural areas as human food while the remaining 58 percent goes into animal feed production. (Note that residuals of disappearances not accounted for in industrial use are included here).

Malnutrition is endemic in Nigeria and soybeans are a near-perfect crop to address the problem. Soybeans are affordable as they cost only one-fifth of the price of beef and poultry yet carry twice the protein as these animal products and also offer essential amino acids. Soybeans are also good for the environment because they require fewer insecticide sprays. They also fix atmospheric nitrogen and thus reduce fertilizer used by farmers.

Prices
In 2013, the per ton prices of soybean meal, soy cake, crude soy oil and soybean seed were $688; $675; $1,310; and $580, respectively. Generally, these represented price hike by 40-50 percent over the last 5 years. The increase in price is attributed to excess demand over domestic output.

Trade
Beginning in September 2008, the GON removed the import ban on crude vegetable oil and imports have continued to increase. However, imports of all vegetable oil in retail packs remain banned.

Based upon industry sources, Nigeria has been steadily importing soybean meal and occasionally soybeans since 1999, primarily from Argentina, Brazil, China and India. It is estimated that Nigeria would require soybean meal imports of approximately 120,000 tons per year by end of 2014. The import duty on soybeans and soybean meal for animal feed is 15 percent.

Policy
The GON removed the import ban on crude vegetable oil in 2008. The import duty on soybeans and soybean meal for animal feed is 15 percent.

Marketing
Local grain merchants play a key role in the value chain, aggregating volumes from local markets in soy-producing regions and through networks of commission agents and village-level traders and acting as the main channel of supply of raw soybean for processors. Processors typically sell soybean oil and meal to wholesalers and distributors, which trade oil to the retail sector and cake to the animal feed industry.

At the moment, there are strong exports of U.S. soybean and products to Nigeria. Feed millers in Nigeria are familiar with the higher quality of U.S. soybean meal, especially with protein levels exceeding those commonly seen for products from other countries. Market opportunities of about 120,000 tons of soybean meal exist for U.S. exporters. Additionally, importers and vegetable oil refinery companies are taking advantage of the removal of the import ban to import.

U.S. soybean, soybean meal and crude vegetable oil exporters are encouraged to explore these growing market opportunities in Nigeria. The Office of Agricultural Affairs can be contacted to identify credible Nigerian importers. In addition, exporters can also arrange to meet with leaders of the Nigerian poultry industry at the annual International Poultry Exposition in Atlanta.

Recent market development activities in Nigeria by the American Soybean Association's World Initiative for Soy in Human Health (WISHH) have generated enormous interest in value-added soy products and soy-based food ingredients. Food processors such as bakeries, dairies, beverage manufactures and snack producers are now incorporating soy products in their production processes largely on account of the nutritional and health benefits and cost effectiveness as protein substitutes and extenders. Best market prospects in this segment include: soy flour used to fortify other foods (bakeries), textured soy protein used as protein substitute in snacks and soups, soy protein concentrates used as an additive in foods and beverages, and soy protein isolates used as food improver.

Production, Supply and Demand Data Statistics:

Oilseed, Soybean Nigeria	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Oct 2012		Market Year Begin: Oct 2013		Market Year Begin: May 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	440	440	440	440	440	400
Area Harvested	440	440	440	440	440	400
Beginning Stocks	88	88	15	15	0	0
Production	450	450	450	450	450	420
MY Imports	5	5	5	5	5	35
MY Imp. from U.S.	0	0	0	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	543	543	470	470	455	455
MY Exports	0	0	0	0	0	0
MY Exp. to EU	0	0	0	0	0	0
Crush	228	228	200	200	190	190
Food Use Dom. Cons.	220	220	200	200	195	195
Feed Waste Dom. Cons.	80	80	70	70	70	70
Total Dom. Cons.	528	528	470	470	455	455
Ending Stocks	15	15	0	0	0	0
Total Distribution	543	543	470	470	455	455
1000 HA, 1000 MT						