Soybean: On Becoming a Highly Coveted Crop

In Nigeria, the consumption of soybean has increased over the years driven by the poultry, fishery and edible oil industries. Between 2012 and 2020, the Federal Ministry of Agriculture of Nigeria forecasted a growth of 51% for the fishery industry and 20% of the poultry industry under its Agricultural Transformation Agenda. Soybean meal is a vital and preferred source of protein in compound feed and accounts for 20%-30% in poultry feed and 20% of fish feed composition. Furthermore, soybean oil is currently recognized as alternative to palm oil by various industries. There is a growing trend in soybean consumption as it is the second most consumed and produced vegetable oil in the world, accounting for 28% of oils produced after palm oil at 37% (FBNQuest, 2016).

Despite the growing demand from the poultry and edible oils industries, the production and supply still do not meet the demand in Nigeria. In 2015/2016, Nigeria produced approximately 680,000 Tons of soybean, failing to meet the domestic demand estimated at 2.2 Million Tons in 2016 due to low yields.

Nigeria is the second highest producer of soybean in Africa after South Africa, whose production was 740,000 Tons in the same year; this is though the area harvested by Nigeria is 28% higher than that of South Africa with 700,000 Ha (figure 1).

Moreover, in Zambia, the third highest producer in Africa, in 2015/2016 the land cultivated was 16% of the land cultivated in Nigeria, but with a yield 52% higher.

One of the key issues constraining the production of soybean is the limited use of improved varieties. Several organizations including the International Institute of Tropical Agriculture (IITA) and the National Cereal Research Institute (NCRI) have developed several improved varieties of soybean seed. However, adoption has been low because farmers prefer the TGX 1448-2E variety, the most popularly used in the country. Although the variety is a high yielding seed, the practice among farmers including re-using the same seed for multiple planting cycles has contributed to the low yields.
The TGX 1448-2E variety is resistant/tolerant to many climatic stresses in commercial soybean growing areas (Guinea Savanna agro-ecological zone) of Nigeria. Soybean is largely produced in the middle belt, with Benue State as the production hub. Other major producing states include Adamawa, Kaduna, Kano, Katsina, Kwara, and Taraba. The production output of Soybean in Benue alone is over 100MT representing about 30% of the total production in Nigeria (as revealed in figure 2 below):

Figure 3: Soybean Producing States in Nigeria

“Production output in Nigeria relies on the vastness of the land cultivated rather than the effectiveness of production practices”

Soybean: Resorting to Imports to meet Local Demand

It was estimated that over 120,000MT of soybeans including raw soybeans, flours and meals were imported into Nigeria in 2015. Majority of these imports are sourced from the USA and Argentina, where annual production is 107 Million MT, and 57 Million MT respectively.

The price of soybean in Nigeria is considerably higher compared to the international market’s. In August 2017, the local price of soybean in Nigeria was 18% and 19% higher than that in the United States and Argentina respectively.

In addition, the local supply of soybean in low due to the variation in prices in various parts of the country. In states such as Taraba and Anambra states, the price of soybean is almost 47% higher than the price in Delta state.

The fluctuations in the local price of soybean has reduced the dependence of processors on locally grown soybean and encouraged importation.

Figure 4: Net Exporter vs Nigeria Prices of Soybean in USD/Metric Ton (August 2017)

Source: USDA, Oilseeds: World Markets and Trade, 2017 and Novus Agro Commodities Prices, 2017

Figure 5: Prices of soybean major markets in states across Nigeria in Aug 2017 (N)

Source: Novus Agro Commodity prices, August 2017
Soybean has become such an important component of industrial production due to its nutritional content. Soybeans contain all three of the macro-nutrients required for good nutrition including complete protein, carbohydrate and fat, as well as vitamins and minerals, including calcium, folic acid, and iron. According to the World Initiative for Soybean in Human Health, soybean is the only vegetable that contains complete protein. The demand for soybean is driven by large and small-scale processors in Nigeria. Soybean is processed into various products in Nigeria and the most common include the soybean meal and the edible oils. The flow chart below illustrates the process.

**Figure 1:** Soybean Composition

![Soybean Composition](source: Adapted from: World Initiative for Soy in Human)

Majority of imported soybean comes in the form of soybean meal due to the growing poultry industry. Large processors including Obasanjo farms and Livestock Feeds Ltd often import most of their feed needs mainly because of the relatively stable international soybean market. Moreover, these companies often obtain discounts for their bulk purchases as well as waivers on import tariffs. Furthermore, due to the low local production and the high prices, in September 2008, the Government of Nigeria removed the import ban on crude vegetable oil but maintained the ban on the retail packaged vegetable oil. With the lifted ban, processors imported crude soybean oil into the country. As illustrates table 1, the lowest tariffs are implemented on crude soybean, and refined soybean oil incur high tariffs. The high tariff on refined oils has been one of the factors driving the growing import volumes of edible oil into Nigeria.

**Soybean : Processed into Numerous Derivatives**

<table>
<thead>
<tr>
<th>Product</th>
<th>Duty</th>
<th>VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean Seed</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Crude Soybean oil</td>
<td>10%</td>
<td>---</td>
</tr>
<tr>
<td>Soybean flours and meals</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Oil Cake or other solid residues from extracted oil</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Refined soybean oil</td>
<td>20%</td>
<td>---</td>
</tr>
<tr>
<td>Soy sauce</td>
<td>20%</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Source: Nigeria Customs Services

**Table 1: Soybean Import tariffs**

Figure 6: Soybean Processing chart
**Poultry Industry:** Feed is an important component of the poultry production as ~70-80% of the cost of poultry production is attributed to feed. Maize and soybean constitute majority of the cost in the feed composition. The industry is categorized in two types of commercial farmers: the vertically integrated large farms that produce their own feed and the small farmers that purchase branded feed from specialized feed producers.

The vertically integrated farms include companies such as Amobyng, Obasanjo Farms, Anadariya Farms, and Dayntee farms. On the other hand, the small-scale farmers purchase branded feed from organizations such as Novum Agric Industry (Supreme Feeds), Premier Feed Mill (Top Feed) UAC’s Livestock Feeds PLC, Vital Feed, Hybrid Feeds Ltd and Durante Fish Feed. Due to the low availability of soybeans, some farmers use groundnut as their protein source.

**Edible Oil Industry:** Soybean contains about 18.2% of oil and is one of the oilseeds with the highest oil content. A close substitute is groundnut in Nigeria. On the local market, the extracted oil from soybean is further processed and packaged for human consumption. Some key players in the edible oil industry in Nigeria include Grands Cereals Ltd, Power Oil, Sunseed Nigeria Ltd (Sunola Pure Refined Soybean Oil), Camela Vegetable Oil Co. Ltd and Golden Oil Industries Ltd among others.

**Fast Moving Consumer Goods (FMCG) Companies:** The FMCG companies use various derivates of soybean including soybean flour, girts, oil and concentrates. Some key FMCG companies which use soybean derivates include Nestle, Chi Limited, AACE Foods, and Spectra Nigeria Ltd.
Local Processing of Soybean: Local processing of soybean occurs in rural communities where soybean is processed into soybean soup, soybean cake, pap etc. Soybean is also used as a protein alternative in low-income households where complementary animal proteins such as fish, meat, egg, milk are not affordable. Soybean is also processed into soybean cheese and consumed with local dishes.

Initiatives Focused on Increasing the Local Supply of Soybean in Nigeria

NESTLE: Soybean Popularization Project:

Since 2012, as part of its Corporate Social Responsibility, Nestlé has collaborated with the University of Agriculture in Abeokuta to increase soybean production in the South West. The activities of the organization have focused on capacity building and agricultural extension services, including assessing the status of the crop and providing advice on farming practices, harvesting techniques and other handling processes. In addition, soybean threshing machines have been donated to make the production process more efficient and less tedious.

Nestlé reports that 200 local farmers have benefited from the project and over 150 tons of soybeans have been produced from high-quality seeds. As a result of this initiative, there is greater interest in soybean production by local farmers and increased engagement among other stakeholders such as the Grain Farmers Union, the Institute for Agriculture Research and Training, and the International Institute of Tropical Agriculture (IITA Nigeria).

IITA: Enhancing soybean production in Nigeria through the SARD-SC Maize System Project

In 2016, IITA initiated the “Enhancing soybean production in Nigeria through the SARD-SC Maize System” project with the objective to promote soybean cultivation and utilization in Nigeria. The project is expected to mobilize the strength and expertise of stakeholders in the maize-soybean value chain to support production of soybean, a complementary crop to the maize commodity value chain in the SARD-SC project.

Comprehensive Agriculture Development Programme (CADP):

Millstones FZE is investing $33million (USD) into establishing an Oilseeds Processing Plant and Vegetable Refinery in Gbako, Niger State. The project is expected to improve the incomes of about 150,000 to 180,000 people through an installed capacity of 180,000 tons of soybeans annually into vegetable oil and soybean meal. In 7 years, Millstone FZE envisions to employ (directly) about 2,000-3,000 staff (factory workers, farmers/Agro-related staff, sales, logistics and distribution) and also directly source from about 400,000 small holder farmers and directly affect the livelihoods of 1,000,000 people.

USAID’s Markets II Programme:

The Market II programme, funded by the USAID, was implemented between 2012 and 2017 and focused on several value chains including soybean. Markets II was designed to provide technical assistance and capacity building support to 4,000 smallholder farmers in Benue state, 2,000 in Niger state, and 1,500 in Kaduna state with the core objective of increasing rural household income and providing raw materials for fish feed to fish meal. To produce high yields, environmental preservation and soil fertility, MARKETS II improved soybean yields by 60% through increased pod-bearing flowers. Overall, through the MARKETS II Project achieved more than $199.2 million in sales at both farm and firm levels, facilitated $11.4 million in agricultural and rural loans and leveraged $25.2 million in credit for clients.
Tell us about your organization

AACE Food processing and distribution Ltd. (AACE Foods) is an indigenous Nigerian company established in November 2009. We process, package and distribute nutritious and tasty products made from the best of West Africa’s fruits, herbs, vegetables and cereals. Our product line consists of spices, spreads, sauces and complimentary food that excite and satisfy institutional, commercial and retail customers. The company was co-founded by Ndidi and Mezuo Nwuneli and the passion behind it was motivated by the need to address the challenges of malnutrition in Nigeria, extreme dependency on imported food products and high harvest waste suffered by smallholder farmers.

What do you use soybeans for in your organization and why Soybean?

Soybean is a major component in our complementary products; SoyaMaize and SoSo Nourish, which were developed particularly to address moderate malnutrition in children. Soybean is used as the primary source of protein in the production of our complimentary food products which can be prepared into cereal or swallow. Among the food crops, soybean is one of the best sources of plant protein content and a good source of other vitamins and minerals.

Where do you source your soybean?

One of our founding objectives of AACE Foods is to improve the livelihoods of smallholder farmers. This objective guides not only our Soybean procurement but also the sourcing of our other raw materials. The bulk of our purchases come from smallholder farmers in the rural communities in Northern Nigeria from states like Katsina, Kaduna and Kano.

How has the price of the commodity changed over the last couple of years and how has that affected your activities?

As with majority of other agro-commodities, the price of soybean has seen an astronomical rise which is majorly due to supply deficit considering the heavy demand to meet both poultry and human requirements (meal and oil). In the past couple of years we have seen a price increase of about 30% in soybeans which along with other economic situation spurred us to match raw material cost increase with a corresponding increase in product prices.

Tell us about the dynamic partnership between your organization and farmers associations?

AACE Foods has built a solid relationship with smallholder farmers clustered in co-operatives across Nigeria through assistance from developmental partners like the African Enterprise Challenge Fund and IFDC–2Scale.
We have provided smallholder farmers with training on modern agricultural practices, provided them with inputs and helped facilitate micro-finance.

What are the advantages of working with farmer clusters?

Working with farmer clusters has enabled us develop strong training programs around improving all of their activities right from pre-planting to harvesting and storage in a bid to improve on produce quality. The farmers have grown with us over the years and have seen their net benefits increase year in year out. These relationships have enabled us develop a traceability system, where every produce delivered to us can be traced to the smallholder farmer that produced it. The traceability system also enables us to monitor fertilizers and pesticides been used in a bid to ensure that whatever they produce meets the industry standards and customer specifications. One of our core values as an organisation is continuous improvement and this has been passed on to the farmers and we see them getting better every year.

What are the challenges you faced working with the farmers?

From one farmer’s group to another, the challenge differs from inability to supply up to requested quantity of produce to leadership tussle, out of specification produce, and dishonesty with mixing good products with bad grades. In addition, farmers sometimes over promise and under deliver.

What do you recommend individuals or organizations do to support farmers in their activities?

All they need to do is consume food products made in Nigeria to support the growth and development of local value chains.
In July 2017, Sahel Capital officially kicked off its 2017 Sahel Scholars Programme (SASP) in partnership with the University of Nigeria, Nsukka (UNN). With the Programme, Sahel Capital aims to educate and empower Nigerian undergraduate students who are passionate about agribusiness through mentorship, hands-on experience and scholarship.

“Unlocking the Potential of Agriculture” Seminar

The Programme’s official kick-off event was a one-day seminar held on UNN’s Nsukka campus in Enugu State titled “Unlocking the Potential of Agriculture”. The seminar which was well-attended by professors and top-performing students of the University’s Agriculture faculty, focused on initiating compelling dialogue on practical career and entrepreneurial opportunities in agribusiness for students approaching their final year of study. The event included a talk on “Opportunities in Agribusiness”, an interactive panel on “Career Opportunities in Agribusiness” and case competitions that tasked students to think through real-life challenges in the sector and proffer plausible solutions from a policy and business perspective.

Speaking at the event, Mezuo Nwuneli, Managing Partner at Sahel Capital Agribusiness Managers said: “We recognize the achievements the Faculty has made over the years in establishing itself as a strong program driving agricultural research and the education of future leaders in the sector. Through the Scholars Programme, we are committing to support agriculture students in pursuing their passion for the sector.” Professor Bonaventure Echezona, Dean of the Agriculture Faculty at the event said: “Today’s seminar has been very engaging and eye-opening, our students are privileged to be benefitting from this Programme. We would like to appreciate Sahel Capital for starting its Scholarship Programme with us and we look forward to working together in empowering students”.

Visit to Sahel Capital’s Offices in Lagos for Shortlisted Students

After a very competitive and rigorous review of submitted essay entries, written aptitude test scores and interviews of the faculty’s top fifty students, five (5) students were shortlisted for a two-day visit to Sahel Capital’s offices in Lagos. In late July, the students visited the consulting and private equity offices, interacted with team members, worked on exhilarating mini-projects and got the opportunity to ask a wide range of questions. On the visit, Esther Ugochukwu, one of the shortlisted students commented that:

“I learnt that agriculture is still a highly untapped sector of the economy with promising value chains and I was also exposed to quick ways of judging profitability of any business from their profit and loss statements”.

This visit also constituted the final stage of the Scholar selection process, and two students – Chibueze Azoro and Chiamaka Nwagu emerged as the 2017 Sahel Scholars.
Sahel Scholars Programme

Internship

Chibueze and Chiamaka began their 3-month rotational internship with Sahel Capital in August 2017. During their internship, the students have been challenged to apply their knowledge to solve real-life issues. In their 4th week as an intern with the Consulting team, the interns commented:

Chibueze Azoro, 4th year Agricultural Extension Student, University of Nigeria, Nsukka.

Many of us consider ourselves hard workers. I have learnt that it’s not so much on how hard you push, but in what direction. My time in Sahel Capital Partners and Advisory Limited has shown me different directions I never had in mind. In addition to skills I learnt on the job, and through interactions with the team, what I can say is “I see clearly now”. When I pick up a book, listen to a lecture, prepare for an exam, attend a workshop or training, or just do some personal research, I now know what I should be reading, listening to, what questions to ask, and most importantly, how each bit of knowledge I acquire is relevant in the corporate world. If this program can be amplified to reach a wider population of Nigerian students, I think the quality of graduates we will have in Nigeria annually will improve massively.

Thanks Sahel. I’m grateful.

Chiamaka Nwagu, 4th year Animal Science Student, University of Nigeria, Nsukka.

‘Working on projects here has given me the opportunity to analyze and draft project plans, and to witness implementation. In this time, I have also learnt a lot about work ethics especially accountability.’

Left: Students and Faculty members participating in a group activity at the seminar at the University of Nigeria, Nsukka.
**Sahel Speaks...**

**Sahel Capital Partners and Advisory Limited**

- **The Graca Machel Trust**: Ndidi Nwuneli, Managing Partner, served as a Panelist discussing the “Opportunities in the Agribusiness Landscape” at the Advancing African Women Conference organized by the Graca Machel Trust in DarSalam Tanzania - August 10th, 2017.

- **The PLAN Conference**: Ndidi Nwuneli, served as a panelist discussing “The Nigerian Dairy Industries and Opportunities for Cold Chain” at the PLAN Conference convened by GAIN and the Rockefeller Foundation in Lagos - September 12th, 2017.


- **UNGA/UNDP**: Ndidi Nwuneli, Managing Partner, served on a high-level panel on the “Business Solutions for the SDGs.” The Forum was organized by UNDP, the UN Global Compact and the Business Call to Action (BCTA) in New York City on September 20th 2017.

**Sahel Capital Agribusiness Managers Limited**

- **Fourth Convocation Ceremony, Landmark University**: Mezuo Nwuneli, Managing Partner, was a guest speaker at the fourth Convocation Ceremony at Landmark University, Omu-Aran, Kwara State. He spoke on “The Business of Agriculture: Benchmarking and Attaining New Frontiers in Agricultural Development for Africa.” - July 13th, 2017.

- **ESG Seminar, UNILAG**: Oladele Shekete, Director, Environmental and Social Responsibility, facilitated an ESG Seminar on "Roles of Environmental Specialist in Private Equity and Venture Capital Industry" held at the Faculty of Science, Department of Chemistry (MSC. Class in Environmental Management), University of Lagos. - July 25th, 2017.


- **EDC-Oxfam Stakeholders’ Forum**: Olumide Lawson, CFA, Spoke on a panel, at the EDC - Oxfam Stakeholders' forum, on "The Intersection of Social Enterprise and Impact Investing" - August 24th, 2017.


- **National Livestock Conference**: Deji Adebusoye, Vice President, co-facilitated the National Livestock Conference held at the International Conference Center, Abuja, on “The Transformation of the Nigerian Livestock Industry” organized by The Federal Ministry of Agriculture and Rural Development (FMARD) - September 11th-14th, 2017.

- **FATE Foundation Scale-Up Lab Agribusiness Accelerator Programme**: Olumide Lawson, CFA, was a guest speaker at FATE Foundation ScaleUp Lab Agribusiness Accelerator Programme. Spoke on “Funding for Scale” - September 15th, 2017.

- **11th EDC Annual SME Conference**: Olumide Lawson, CFA, Served on a panel, at the 11th EDC Annual SME Conference, on “Funding Opportunities- Collateral, Cash and Character” - September 20th, 2017.

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**Sahel is Hiring...**

Follow the links below to apply for the specific roles:

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- **Business Analyst (Proficiency in French)**

[Click here](#)

- **Project Coordinator Kano**

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