



Sahel Capital Partners & Advisory Limited  
Sahel Capital Agribusiness Managers Limited

*Catalysing sustainable agriculture and nutrition...*



## MAIZE: Enhancing the livelihoods of Nigerian farmers

Maize is the second most cultivated crop in Nigeria in terms of area harvested (5.8million Ha, second to Cassava’s 7.1 million Ha, FAOSTAT, 2014). Nigeria is the second largest maize producer in Africa, after South Africa, with an estimated 10.79 million MT produced in 2014 (FAOSTAT, 2014). Despite its high production volumes, Nigeria’s average maize yield of 1.8 MT/Ha (FAOSTAT, 2014) is one of the lowest among the top 10 maize producers in Africa. It lags behind countries such as Egypt and South Africa where the yields are 7.7MT/Ha and 5.3MT/Ha respectively (FAOSTAT, 2014). Simply by addressing this low yield issue, Nigeria could become the largest maize producer in Africa and one of the largest producers in the world without increasing the area currently used for its cultivation.

Figure 1: Production and average yield of the top ten maize producing countries

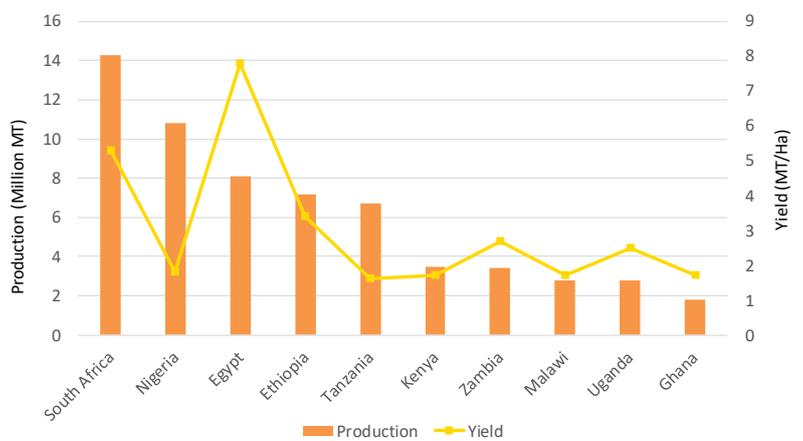
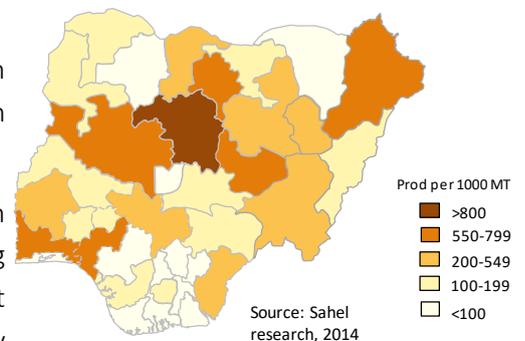


Figure 2: Volume of maize produced per state



In Nigeria, the largest volumes of maize are produced in the Northern region, particularly in Kaduna, Borno, Niger, and Taraba and in the South-Western states including in Ogun, Ondo and Oyo.

Maize in Nigeria is mainly produced by smallholder farmers, each cultivating an average of 0.65Ha (Sahel Reports, 2014). Cropping systems differ from North to South. Northern farmers typically do not practice intercropping. While, in the South, maize is usually intercropped with yam, cassava, guinea corn, rice, cowpea, groundnut, and soybeans.

## Seasonality of maize

The production season of maize differs in the North and South. The main season in the North is May—October while the main season in the South is March—August. There is usually a second season (August—January) which is rain-fed in the South and irrigated in the North. Harvest is usually done three months after planting. However, the cycles have been affected in recent years by changing weather patterns.

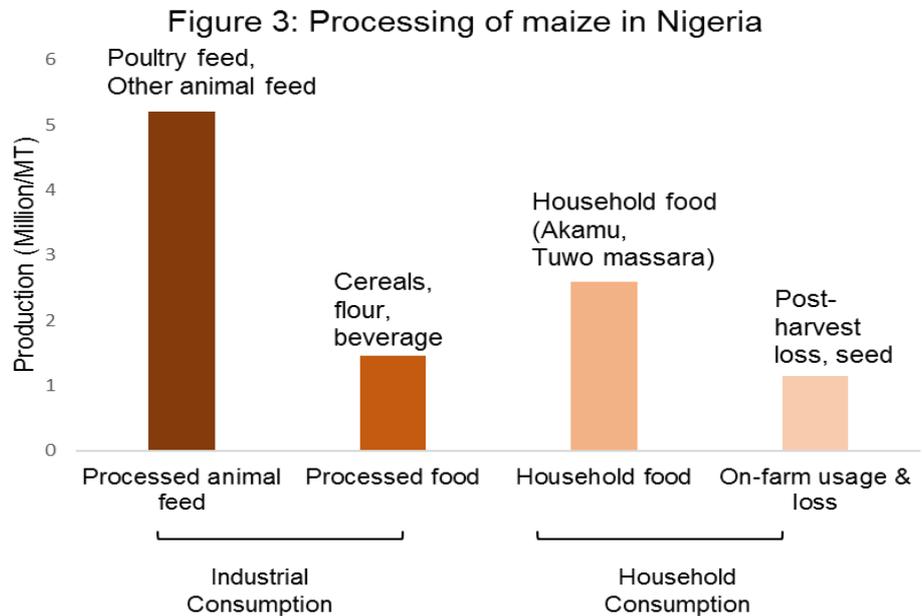
Table 1: Maize production seasonality chart

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
North - 1st Season					Planting	Growing Period	Growing Period	Growing Period	Harvesting			
2nd Season	Harvesting							Planting	Growing Period	Growing Period	Harvesting	
South			Planting	Growing Period	Growing Period	Growing Period	Harvesting					
	Planting					Growing Period				Harvesting		

During the growing season the price of dry maize, locally referred to as “old maize”, increases significantly due to growing demand by processors. Grain merchants in Northern Nigeria store the maize during the peak of availability and sell at higher prices in off-season periods to food processors and feed mill operators.

## Processing of Maize

Maize has become indispensable for food security in Nigeria. Much of the maize produced is consumed in a range of commercial sectors. About 50% of the maize produced is consumed by the animal feed sector, with poultry claiming as much as 98% of the total feed produced in Nigeria between 2005 and 2010 (USDA report, 2005-2010).



## Some maize products



Baby Food Complementary food



Beverages



Animal Feed

Industrially processed maize products



Local corn porridge known as “pap”



Boiled and roasted corn

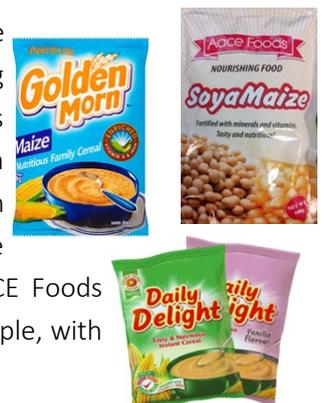


Traditional corn meal “Tuwo Massara”

Household processed maize food

## Nutrition content of maize

Deficiencies in micronutrients such as zinc, iron and vitamin A can cause irreparable damage to the body, such as blindness, stunting, mental retardation, and learning disabilities. Due to the importance of maize in the Nigerian diet, institutions such as HarvestPlus have pushed for mainstream maize biofortification through initiatives such as ‘Scaling Up Bio Fortification Investment in Nigeria’. HarvestPlus’ vision is to reach 1 billion people by 2030 with biofortified foods. In addition, organizations such as Nestle (Golden Morn and Cerelac), Flour Mills (Daily Delight), NASCO (Cornflakes), and ACE Foods (Soya Maize and Soso Nourish), fortify their maize products, which reach millions of people, with vitamins and minerals.



## Key Challenges in the Maize Value Chain

Several challenges plague all value chains in Nigeria, such as access to finance, market linkages, climatic changes, and the fluctuating prices of commodities. However, some key challenges in the maize value chain include:

- **Aflatoxin contamination:** Aflatoxins are a family of disease-causing toxins produced by certain fungi that affect maize, have carcinogenic effects and can cause stunting. The International Institute of Tropical Agriculture (IITA) estimated that up to 60% of maize produced in Nigeria may be aflatoxin contaminated (AgResults—Aflasafe report). However, many smallholder farmers are unaware of aflatoxins' negative health implications and/or existing crop treatments. The AgResults-Aflasafe project is partnering with aggregators in Nigeria to incentivize farmers to adopt an aflatoxin bio-control technology developed by IITA (Aflasafe). AgResults anticipates engaging 31,000 smallholder farmers to produce 480,000 MT of aflatoxin-free maize over the 4-year period of the project.
- **Seed systems:** The slow adoption of hybrid seeds, due in part to the smallholder farmers' propensity to recycle their seeds, coupled with the limited availability of improved open-pollinated maize varieties in key maize-growing states is a major limitation to an overall increase in maize yield. In addition, small holder farmers have difficulty gaining access to improved varieties because many input companies are yet to extend their supply chains to rural areas where many of these farmers operate.

## Initiatives Contributing to Maize Development in Nigeria

Some examples of active value chain specific initiatives for agricultural development in Nigeria:

**Access to finance initiatives:** The government has introduced various schemes aimed at encouraging the growth of credit in the agricultural sector including:

- **Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending (NIRSAL):** Established by CBN and the Bankers' Committee, NIRSAL guarantees up to 75% of the face value of loans made to the rice, cassava, and maize value chains. It insures about 50% of losses incurred by large farmers and roughly 75% of losses incurred by small and medium-scale farmers.

- **Commercial Agriculture Credit Scheme (CACS):** Under the program, ₦200 billion (roughly \$1.3 billion) was earmarked for lending at 9% to agricultural entities involved in production, processing, storage, inputs, and marketing. The production includes cash and food crops such as maize, poultry, livestock and aquaculture. The program was recently extended to September 2025. As of February 2014, the total amount disbursed to participating banks under CACS was ₦228.2 billion for 307 projects.

**Research institutes innovations:** The International Institute of Tropical Agriculture (IITA) and other institutions in the African crop space focus on introducing improved varieties, achieved through biotechnology and genetic breeding, to the local value chains. IITA has created maize varieties that are resistant to the devastating *Striga* parasites, P48W01 and P48W02, respectively known as IITA IR-Maize Hybrid 2 and IITA IR-Maize Hybrid 4. In addition to protecting maize crops from *Striga hermonthica*, these hybrids also have a yield potential of 5MT/Ha compared to the 1MT/Ha yield potential of more commonly used local maize varieties.

## Company Spotlight

**Babban Gona:** Based in Kaduna State, Babban Gona seeks to improve the income and livelihood of one million smallholder maize farmers by 2025. It operates by franchising "Farmer Groups", that are essentially cooperatives of smallholder farmers. Babban Gona subsequently provides tailored and cost-effective services to these farmers on the condition that they adhere to the advice given to them to increase their yields and profits. Babban Gona provides them with yield enhancing inputs, technical assistance, and market linkages. Partnering farmers, who together have 5,000Ha under cultivation, have seen a 3.5 times increase of their income from harvesting maize with Babban Gona.



**Dayntee Farms:** Dayntee Farms Limited (“Dayntee”) is a large commercial poultry farm located in Kwara State. Dayntee began operations in 2012 and currently sells table eggs, day-old chicks and point-of-lay birds. The Fund for Agricultural Finance in Nigeria (“FAFIN”), invested in Dayntee in August 2016, with the aim of expanding the company’s production capacity amid rising domestic demand for animal protein.



Maize is a vital component of poultry nutrition because it provides the birds with energy for daily activities. Typically, maize constitutes up to 50% of the inputs used for feed production. Like most medium to large scale poultry farms in Nigeria, Dayntee mills its own feed as opposed to purchasing finished feed. On average, Dayntee buys 170 MT of maize a month for its feed formulation. The company purchases the maize from farmers and traders in Northern Nigeria, and conducts laboratory tests to ensure the grains are suitable for poultry consumption.

## Sahel Speaks...

- **Context Annual General Meeting:** Ndidi Nwuneli was invited to speak at the Context Network’s 25th Annual General Meeting in Phoenix, Arizona on February 20, 2017.
- **INSEAD Alumni Industry Roundtable:** Mezuo Nwuneli sat on the panel for the Inaugural INSEAD Nigeria Roundtable Discussion on “The Business of Agriculture in Nigeria—Fact & Fiction”, which held on March 9, 2017 in Lagos.
- **AMSCO Conference:** Mezuo Nwuneli was a member of the panel at the AMSCO Conference themed “Homecoming Revolution; The Future is Now; A look at the African Diaspora”, which held in Lagos on March 14, 2017.
- **BusinessDay Agribusiness & Food Security Summit 2017:** Ndidi Nwuneli and Olumide Lawson spoke on the “Tackling Post harvest losses & increasing value addition” panel and the “Funding for agriculture, Insurance and the prerequisite of farmer education” panel respectively at the Business Day Summit on March 23, 2017.

## Sahel Announcements...

- **Investment in Crest Agro Products Ltd.:** Crest Agro Products Ltd. is an integrated cassava processing company with operations in Kogi State. The company produces cassava on a 13,000-hectare mechanized cassava farm in addition to having a functional and growing outgrowers network that has already reached 400 smallholder farmers. The company’s starch processing plant is scheduled to commence operations by the end of 2017, and the company is uniquely positioned to grow significantly and become a market leader within the next few years. Sahel Capital Agribusiness Managers through FAFIN and in partnership with CardinalStone Capital Advisers (CCA) has invested in Crest Agro, supporting their vision to become the leading producer of food grade cassava starch for industrial users in Nigeria and West Africa.
- **Nigerian Dairy Development Programme:** The Nigerian Dairy Development Programme (NDDP) is a processor-led dairy programme implemented by Sahel Capital Partners & Advisory Limited. The program is geared towards improving the livelihoods of smallholder dairy farmers in Nigeria by improving the productivity of their cattle and integrating them into the formal dairy value chain in Nigeria. Following the signing of MoUs in February and March 2017, Sahel will be partnering with L&Z Integrated Farms Ltd. and Kano State, as well as FrieslandCampina Wamco and Oyo State for the pilot phase of this programme, following the signing of MoUs.

## Sahel is hiring

- ◆ **Business Analyst:**  
<https://sahel-capital.workable.com/jobs/448921>
- ◆ **Manager:**  
<https://sahel-capital.workable.com/jobs/449013>
- ◆ **Monitoring and Evaluation Officer:**  
<https://sahel-capital.workable.com/jobs/4514587>

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