

Investment Opportunities In Nigeria's Sorghum Value Chain

January 2020

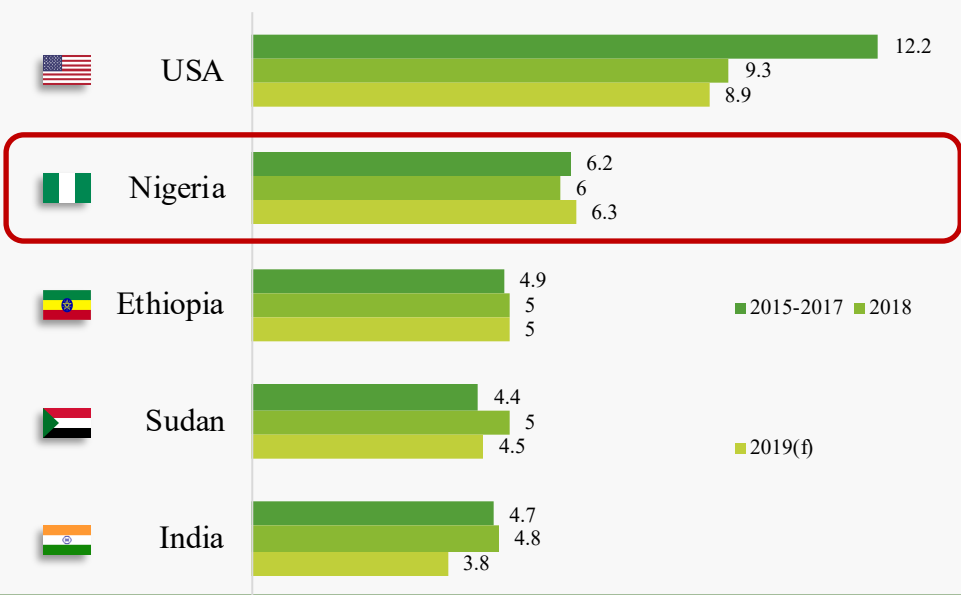




Executive Summary – Why Nigeria?

Nigeria is the second largest sorghum producer in the world and the largest sorghum producer for human consumption

Top 5 Sorghum Producers - 2018 (MMT)¹



Nigeria offers significant opportunities for sorghum sector players

- Being the second largest sorghum producer in the world, Nigeria offers significant opportunities to play a key role in the \$1.44bn global sorghum export market which is expected to grow by 4.2% through to 2025.
- Local processing of sorghum into tertiary products has also seen increased activity from 2013 to 2018 where the proportion of processed sorghum has grown from 2% to 15%.
- Sorghum prices in Nigeria have also been on a decline compared to maize and other substitutes therefore making it a relatively cheaper raw material which is widely-produced in-country.

Nigeria's strong economic capacity and improving ease of doing business positions it as a favorable investment destination

Largest country by population in Africa and 7 th largest in the world ²	An agriculture-driven economy with the sector contributing 29.25% to total GDP ³	15-place rise on the global ease of doing business ranking in 2019	Part of the African Continental Free Trade Area
Largest GDP in Africa and 29 th largest in the world	A huge labour force with 33.5mn people employed in the Agriculture sector	Tax incentives for agribusiness players	Major ongoing infrastructure projects by the Government

Sources: 1 – [FAO Food Outlook](#); 2 – [The World Bank Data Bank](#); 3 – [NBS](#)



Executive Summary – Why Nigeria?

Significant investment opportunities exist across the Sorghum value chain

Input, primary production and the Trade & distribution milestones in the Nigerian sorghum value chain present substantial investment opportunities and potentially large returns due to key sector gaps that are yet to be addressed

S/N	Opportunity	Value chain position	Estimated opportunity Size (Annual Revenue)
1.	Investment in sorghum production for export	Primary Production, Trade & Distribution	• \$148mn
2.	Investment in a sorghum haulage system	Trade and Distribution	• \$11.3mn
3.	Investment in agricultural exchanges that trade sorghum, among other crops	Trade and Distribution	• \$682k
4.	Set up of a sorghum-based brewery	Processing	• \$43.8mn
5.	Investment in the set up of a cereal manufacturing business	Processing	• \$4.8mn

There is currently active private sector participation in the Nigerian Sorghum value chain



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01.

Introduction and global assessment



Africa leads the global sorghum production with Nigeria accounting for more than 20% of the continent's production

59.4mn

Tonnes of sorghum produced in 2018¹

\$1.44bn

Total value of sorghum traded across international markets in 2017²

120-140

Days
Average planting to harvest duration for most sorghum varieties³

41mn ha

Total size of land on which sorghum was grown in 2017¹

In 2018, Global sorghum production was led by Africa which constituted 43.6% of total global output for the year. In this region, Nigeria was the largest sorghum producer accounting for almost 21% of total African sorghum production.

S/N	Country		Production (MMT) ⁴	Imports (MMT) ⁴	Exports (MMT) ⁴
1		USA	9.3	-	2.2
2		Nigeria	6.0	-	0.1
3		Ethiopia	5.0	-	0.5
4		Sudan	5.0	0.2	0.3
5		India	4.8	-	0.1
7		Mexico	4.8	0.4	
8		China	3.4	1.1	0.2
9		Brazil	2.1	-	-
10		B. Faso	1.9	-	-

Sorghum is an important crop in the global economic ecosystem and Nigeria is a key player due to its large production

- Sorghum is the 5th most-produced grain after maize, wheat, rice and barley. Its drought-resistance enables it to thrive in harsh conditions where other staple grains cannot grow, and is a result of its finely-branched root system which facilitates high water absorption efficiency.
- This makes it ideal for cultivation in the Sub-Saharan Africa region and in 2018, four sub-Saharan African countries, led by Nigeria, contributed 59.4% of the world's total sorghum production.
- Ongoing trade tensions between the US and China has resulted in China looking for alternative sorghum sources and places Nigeria at an advantage for sorghum exports.

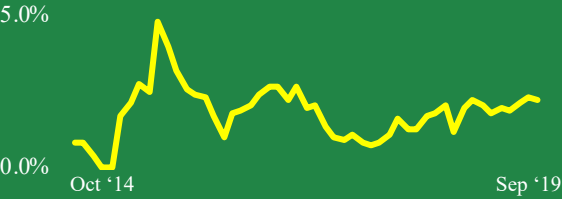


The drive for cleaner energy, recent trade tensions and technology interventions are impacting the global sorghum landscape

01. Growing Utilisation in the Production of Clean Fuels



Composition of Sorghum in Global Grain Ethanol Production (%)¹



- As part of the global push for cleaner energy supply, there has been increasing utilisation of bioethanol which emits less carbon.
- Bioethanol has historically been produced from maize, however, sorghum utilisation has seen significant growth over the last five years.
- The falling price of sorghum globally further makes it an attractive replacement.

02. Impact of the US China Trade War



- The ongoing trade tensions between the US and China have put a strain on their critical sorghum trade relationship as China has recently put a 37% retaliatory tariff on US-sourced sorghum grains and 10% on sorghum seeds from the US.
- These can potentially impact the global sorghum trade flow as China may begin to source for its sorghum requirements from other key producers.

Chinese Tariff on US Sorghum Grains³



03. Technology Interventions



- There have been major technological advancements in hybrid sorghum production which can significantly improve the crop's yield. These include:
 - Multi-seed sorghum variety aimed at improving yield by up to 60%
 - Herbicide-resistant varieties of sorghum are being developed by DuPont
 - Implementation of double-haploid technology in sorghum production to speed up hybrid creation

Sources: 1- [Renewable Fuels Association](#); 2- [Sorghum and Millet Economies in Asia](#); 3 - [USDA](#)

02.
Nigerian market assessment



In 2018, Nigeria was the 2nd largest sorghum producer in the world contributing more than 10% of global production

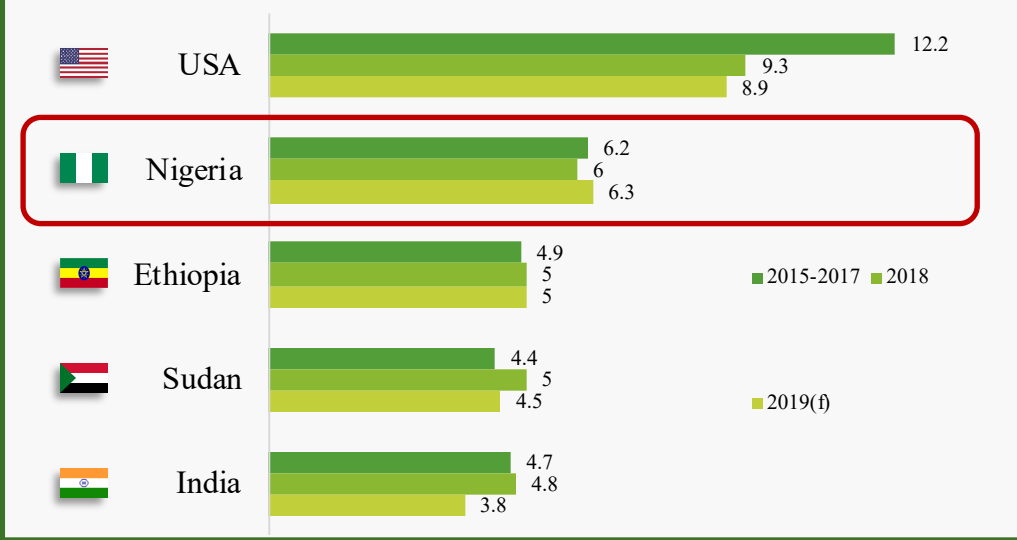
Most Cultivated Crops in Nigeria (2017)

#	Crop	2017 Production (T)	% Production
1	Cassava	59,485,947	30.9%
2	Yams	47,942,712	24.9%
3	Maize	10,420,000	5.4%
4	Rice, paddy	9,864,277	5.1%
5	Oil palm fruit	7,759,426	4.0%
6	Vegetables	7,233,317	3.8%
7	Sorghum	6,939,000	3.6%
8	Tomatoes	4,100,000	2.1%
9	Fruit, citrus	4,088,994	2.1%
10	Sweet potatoes	4,013,786	2.1%

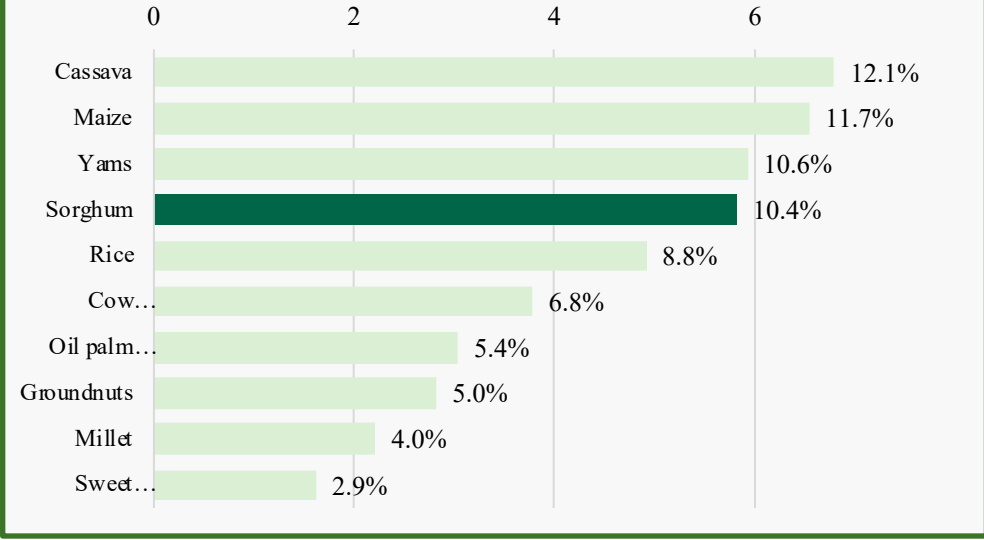
Nigeria is the global leader in sorghum production for human consumption

- Although the USA is the largest sorghum producer globally, Nigeria is the larger producer of the crop for human consumption as more than 90% of all sorghum produced in the US are utilised for animal feed production within and outside the country.
- Nigeria’s high production rate is a result of the active participation of the country’s citizens in agriculture, 33 million of which are small holder farmers.

Top 5 Sorghum Producers - 2018 (MMT)



Cultivated Crop Area (2017) - mha

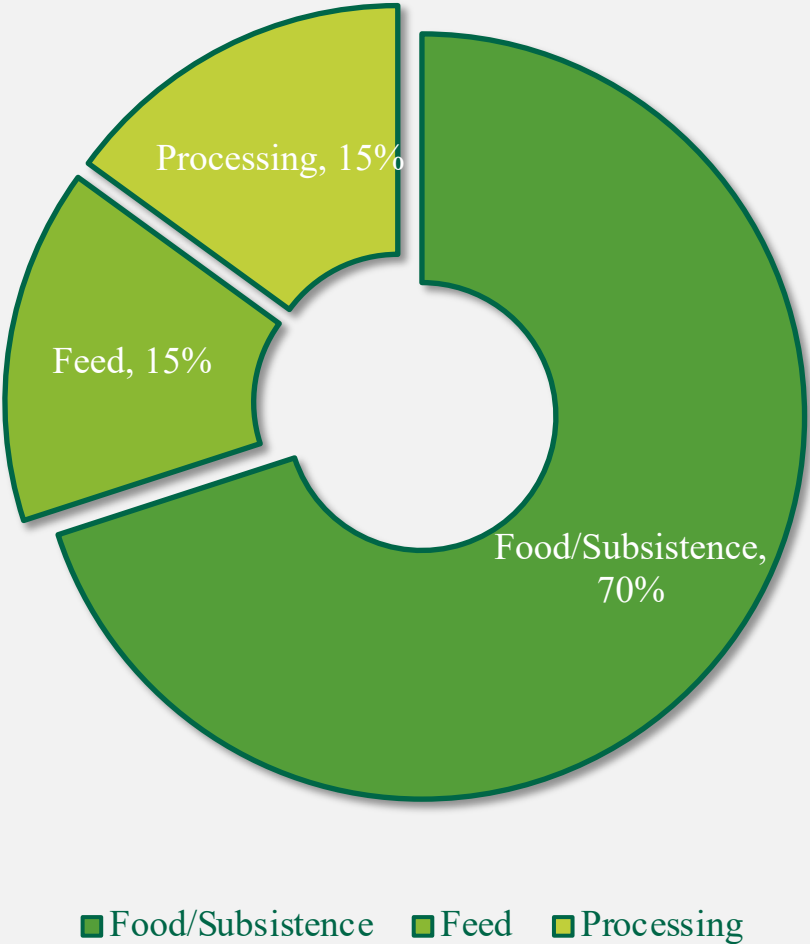


Source: 1 – [FAO: Biannual report on global food markets](#);



Industrial processing of sorghum in Nigeria has grown significantly from 2% to 15% over the last 5 years

Nigeria’s Sorghum Utilisation Profile¹



Nigeria has witnessed strong growth in its industrial sorghum processing over the last 6 years

- In Nigeria, sorghum is mostly utilised for human consumption as it is an affordable food alternative to the country’s largely impoverished population where almost 45% live in extreme poverty.
- 15% of Nigeria’s sorghum is utilised as maize replacements in Dairy, poultry and swine feed due to their similar nutritional profiles and this has been the case since 2013².
- Industrial processing, however, has recorded huge growth from 2% in 2013² to 15% in 2018 as more industrial players are starting to utilise sorghum in their processes.
- Of the 15% of sorghum that is processed industrially, 5% is utilised in the production of clear sorghum beer by key sector players such as Nigerian Breweries and Guinness Nigeria (Guinness) which have incorporated sorghum as barley replacements in their products and have established strategic value chain advantages by investing in the farmers via outgrower programmes as well as active participation in sorghum hybrid development in collaboration with leading research institutions.
- There are significant opportunities for new players to enter and transform the Nigerian sorghum utilisation landscape by producing other value added products from the crop.

Sources: 1 – [Research programme on grain legumes and Dryland Cereals](#); 2 – [Analysis of Incentives and Disincentives for Sorghum in Nigeria](#);



Sorghum has a variety of use cases in human food, beverages, animal feed and industrial processes

Sorghum has diverse use cases

Animal Feed²

- Sorghum is typically used as a maize replacement in animal feed because of their similar characteristics. Some common animal feed use cases include:

 **Dairy and Beef Feed**
Offers reduced ration costs with similar efficiency

 **Poultry Feed**
Sorghum with low tannin content offers better digestibility to poultry

 **Swine Feed**
Offers favorable amino acid, phosphorus and fatty acid profiles

Alcoholic Beverages¹

 **Beer**
Sorghum grains are commonly fermented to produce beer

 **Spirits**
Sorghum syrup is distilled to produce spirits

Other Industrial uses¹

 **Bioethanol**
Fermented to make bioethanol which is used in industrial processes

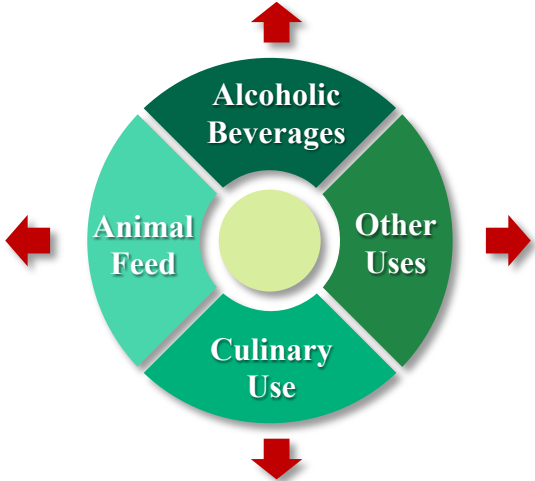
 **Pharmaceuticals**
Used in pharmaceutical diagnoses and synthesis of organic molecules.

 **Walls and Boards**
Sorghum straws are commonly used in making reinforcing wall boards in housing construction

Human Food¹

 **Sorghum Grains**
Sorghum is used in the production of breakfast cereals, bars and can be boiled to be eaten like rice

 **Sorghum Flour**
Sorghum flour is mainly used in the production of unleavened bread



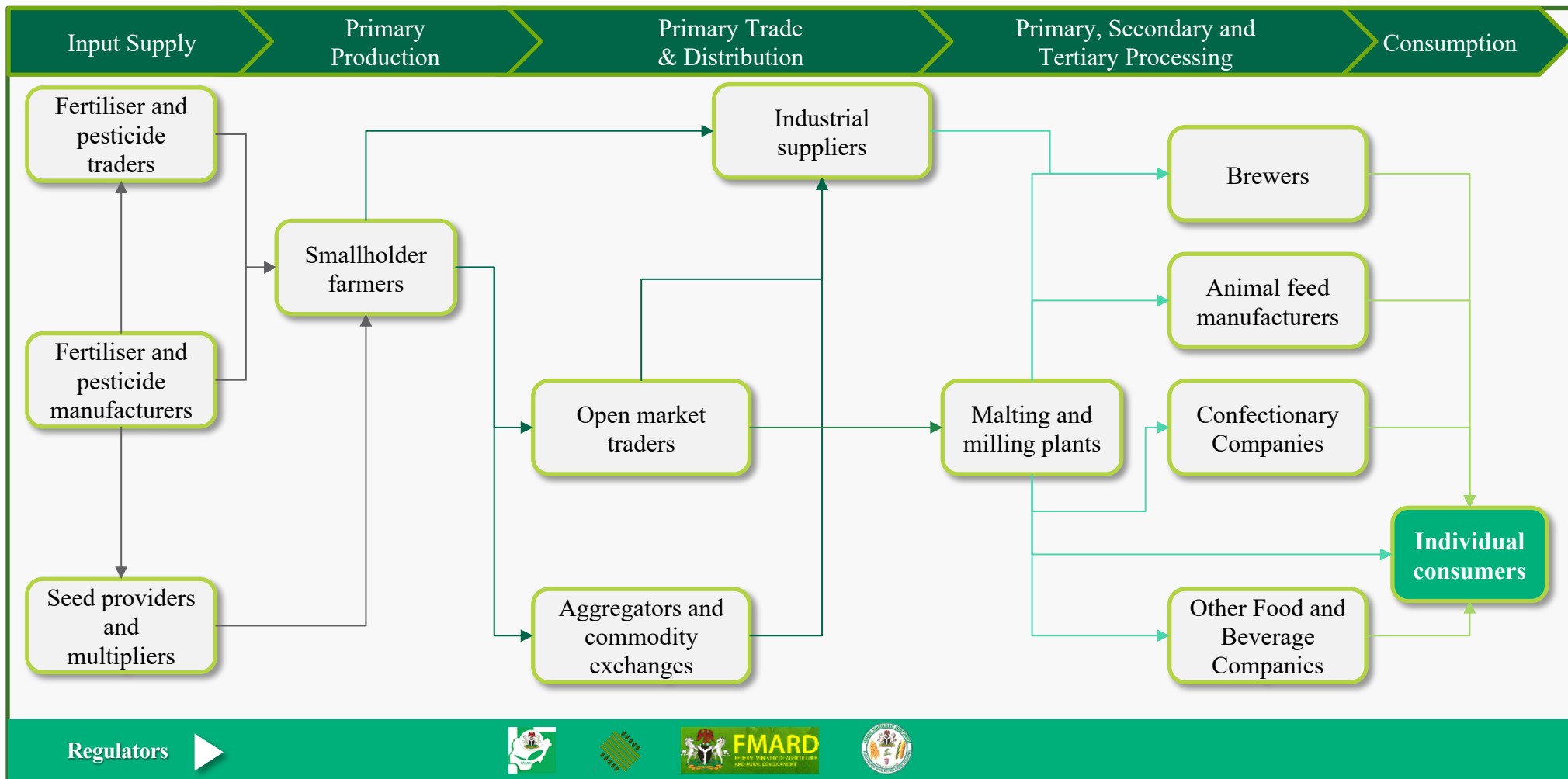
Sources: 1 – [National Sorghum Producers](#); 2 – [United Sorghum Checkoff Programme](#)



The local sorghum value chain

The Nigerian sorghum value chain offers a variety of opportunities across different segments

- The Nigerian sorghum value chain offers significant opportunities for industrial players and investors across key milestones.
- The value chain is defined by key players such as the input producers and distributors, smallholder farmers, traders and processors who all participate in the production of finished products for the Nigerian and international consumer markets.





Nigeria's sorghum value chain offers a wide range of opportunities for strategically-placed market players



A photograph of a sorghum field. In the foreground, a single sorghum seed head is in sharp focus, showing its dense, golden-brown grains. The background is a blurred field of similar plants under a clear blue sky, with some distant hills visible.

03.

Investment opportunities



Investment opportunities along the value chain

Investment in the primary production and trade phases of the sorghum value chain can yield significant benefits

Current Issue: Nigeria does not have a significant share of the \$1.44bn annual global sorghum export market despite being the second largest producer globally

- Nigeria consumes almost all of its produced sorghum and only 100,000MT (1.4 of Nigeria's total sorghum production) is exported
- These exports are via informal trading routes and are exported to neighboring countries like Chad and Niger
- The US-China trade war which resulted in China looking for alternative countries to buy its annual \$800mn+ of sorghum from has not been taken advantage of by Nigeria considering it is the second largest sorghum producer after the US

Opportunity: Investment in Sorghum Production for Exports

Proposed Business Model

- Provide inputs such as mechanisation, fertiliser, improved seeds and extension services to smallholder farmers in order to improve their yield
- In return, the investor will have first right of refusal to produced goods which will then be traded to international markets via commodity exchanges and established industry relationships

Value Chain Position

Primary Production; Trade



Addressable Opportunity size

\$148_{mn}

Estimated annual revenue from sorghum exports

Assumptions

- Average yield per ha of 1.19tons
- Harvested area for sorghum will grow by 23%
- An average price of \$270.5 per ton of sorghum has been utilised in this estimate
- Estimated addressable market size of 35%

Key Player



Nigerian Breweries Plc.



Although their efforts are aimed at generating feedstock for their processing facilities.



Investment opportunities along the value chain

Transport of farm products can yield significant benefits for investors

Current Issue: Quality of transport facilities available to smallholder farmers is poor

- A major cause of product loss to farmers and crop buyers is the loss of products in transit either due to the poor conditions of the transport vehicles, accidents or the products getting stolen
- Existing rail networks are primarily used for the transport of containers as only 3000MT of grains were transferred via rail between 2017 and 2015
- To ensure that the local sorghum value chain thrives, a reliable transport system is required

Opportunity: Investment in a sorghum haulage system

Proposed Business Model

- Set up of an intra-country crop haulage service with a fleet of trucks that shuttle between major sorghum producing zones and utilisation/ export areas.
- Revenue may be earned on commissions for each 30 or 60 ton truck of produce that is transported, which gives farmers options to send products with each shipment therefore making transport costs affordable for them while being guaranteed safety of their products.

Value Chain Position

Trade & Distribution



Addressable Opportunity size

\$11.3_{mn}

Estimated annual revenue from transporting sorghum products to key export/processing regions

Assumptions

- Average cost of transporting a 30ton truck between sorghum producing zones and key processing/ export regions is \$1,623
- Only products to be used for industrial processes will be transported over long distances (i.e. 15%)
- Estimated addressable market size of 20%

Key Players





Investment opportunities along the value chain

There is significant opportunity for modernising the existing sorghum trade system in Nigeria

Current Issue: Most smallholder farmers sell their products in informal markets

- It is estimated that almost 100% of smallholder sorghum farmers in Nigeria sell their products in informal markets
- This is because these farmers mostly produce for subsistence purposes impacts their profitability, as they are left at the mercy of the bargaining power of their customers
- Also, this model hinders the effective transfer of sorghum from farms to industrial processing facilities as institutional buyers are more likely to build their own in-house value chains which typically cost significant amounts e.g. Nigerian breweries has invested about \$280k annually for more than 10 years in the development of its in-house sorghum value chain
- This presents significant opportunities for industry players to create ready-made sorghum trading platforms to facilitate linkage of farmers' products to industrial buyers

Opportunity: Investment in agricultural exchanges that trade sorghum, among other crops

Proposed Business Model

Set up of an agricultural trading platform with a warehouse receipting system to facilitate effective trade between sorghum farmers and institutional buyers. Revenue will be earned via storage, exchange and brokerage commissions on 2-way sorghum trade.

Value Chain Position Trade & Distribution



Addressable Opportunity size

\$682_k

Estimated annual commissions on 2-way sorghum trade only

Assumptions

- Total 2-way commission of 3.2% based on current market rates at average price of \$25.6/MT
- Only sorghum to be used for industrial processing (15% of total production) will be traded on the exchange
- Estimated addressable market size of 80%

Key Player





Investment opportunities along the value chain

There is significant opportunity in the setup of an alcoholic beverage manufacturing facility

Current Issue: Nigeria has a low beer consumption per capita

- Africa is the world's fastest growing beer market and grew by 4.5% in 2017 against the global average growth rate of 1.4% in the same period.
- Nigeria is the 2nd fastest growing beer market in Africa and with beer accounting for 95% of all alcohol sales in the country, there is significant room for growth in the sector as consumption per capita is currently only 9litres compared to south Africa where it is 57litres.
- The realisation of this opportunity has resulted in the entry of some of the world's largest brewers into the market. These include SAB miller which invested \$100mn in the sector in 2012.
- Also, local producers have ramped up investment in the sector as International Breweries recently invested 250mn in a brewery, and Nigerian Breweries has invested \$274,000 annually since 2004 into the local sorghum value chain aimed at harnessing the crop as an affordable feedstock alternative in its brewing processes.

Opportunity: Investment in the set up of a sorghum-based brewery

Proposed Business Model

Set up of a sorghum-based brewery to take advantage of Nigeria's strong sorghum production and large local and African market demand for beer.

Value Chain Position

Processing



Addressable Opportunity size

\$43.8_{mn}

Estimated annual revenue

Assumptions

- A 1% market share in the local beer industry translates to \$17.53mn in annual revenue
- The investor can win up to 2.5% market share considering significantly experienced brewers currently play in the market

Key Players





Investment opportunities along the value chain

The growing demand for breakfast cereals offers opportunities for the set up of cereal production businesses

Current Situation: There is rapidly growing demand for breakfast cereal in Nigeria

- The Nigerian breakfast cereal sector has shown significant growth over the last 6 years, with annual sales rising by 29.6% from \$148mn to \$191mn between 2014 and 2019.
- This growth has been driven by a variety of factors some of which include the increase in the urban youth population, increase in professional employment, and adoption of Western eating habits.
- Nigeria's large sorghum production also provides considerable opportunity to access affordable raw material/ feedstock for cereal production in the country.
- Nigeria's membership in the African Continental Free Trade Area also highlights strategic opportunities to market the produced cereal products to the wider African market of more than 1.2bn people.
- Global cereal manufacturers have identified the opportunities in the Nigerian market have taken steps to enter into the market as illustrated by Kellogg's planned \$420mn investment in the Nigerian cereals sector following the completion of its \$16.4mn cereal processing facility in December 2017.

Opportunity: Investment in the set up of a cereal manufacturing business Proposed Business Model

Set up of a cereal manufacturing business in Nigeria to take advantage of Nigeria's large sorghum production and growing market demand for breakfast cereals in the country

Value Chain Position Processing



Addressable Opportunity size

\$4.8_{mn}

Estimated annual revenue

Assumptions

- Addressable market share has been conservatively estimated at 2.5%.

Key Players





Investment opportunities along the value chain

Mechanisation, fertiliser utilisation and access to extension services are key gap areas in Nigeria's sorghum input sector



Element	Snapshot	Nigeria's Competitiveness
Mechanisation Rate	0.3 hp/ha¹ Nigeria's current agricultural mechanisation rate	- At 0.3hp/ha, Nigeria's agriculture mechanisation rate is 24% less than the FAO-recommended rate of 1.25hp/ha². This significantly impacts agricultural productivity and puts the country at a production disadvantage - However, it offers opportunities for strategically-placed private sector players such as Hello Tractor and IBM who have recently invested in the space.⁴
Fertiliser utilisation	20kg/ha Nigeria's fertiliser utilisation rate	- Although Nigeria is self-sufficient in its Nitrogen-based fertiliser demand, current utilisation is only 20kg/ha⁵ which represents 14% of the global average of 141kg/ha⁶. - Low fertiliser utilisation in Nigeria results in relatively-poor yields and is a result of the subsistence-farming approach by smallholder farmers and a lack of developed supply chains.
Agricultural Extension Services	6% % of Nigeria's smallholder farmers who have access to extension services	- Farmers do not have sufficient information to operate effectively as only 6% of smallholder farmers had access to extension services in 2018.⁷ - However, private sector players such as FarmCrowdy⁸ and ThriveAgric have stepped in to bridge this extension gap in exchange for exclusive trading and export privileges for farmers' produce.

Sources: 1 – [Analysis of Incentives and Disincentives for Sorghum in Nigeria](#); 2 – [FAO](#); 3 – [Tech Crunch](#); 4 – [AllAfrica](#); 5 – [Fanway](#); 6 – [World Bank](#); 7 – [FAO Report on Global Food Markets](#); 8 – [FarmCrowdy](#)

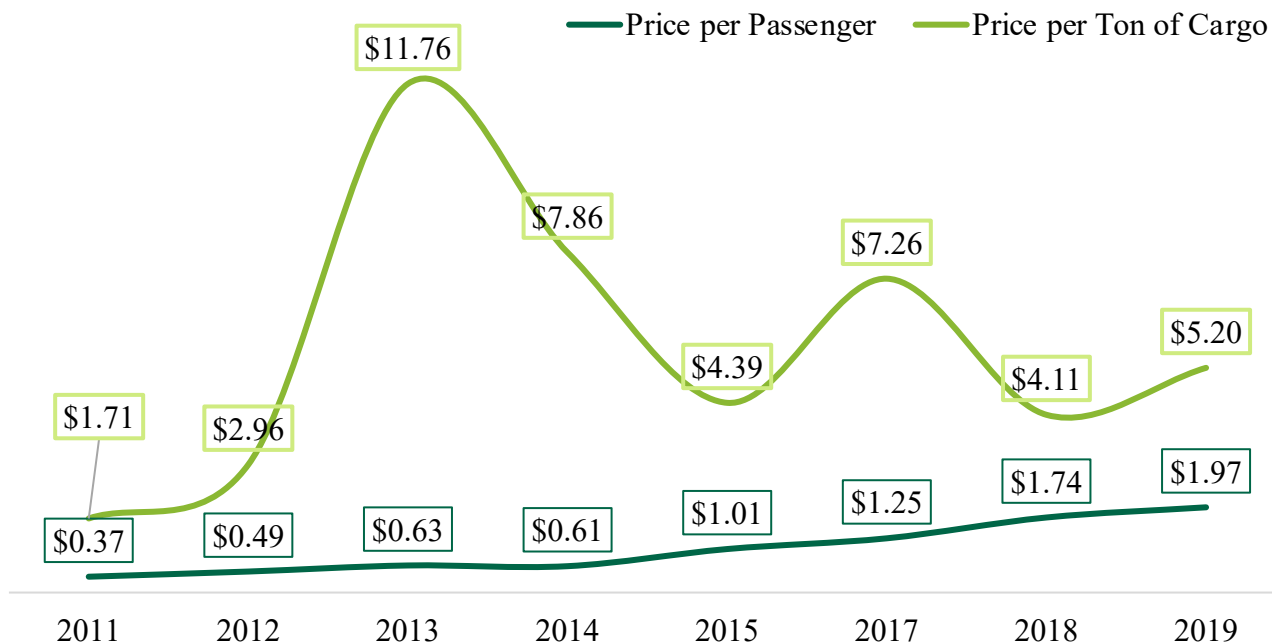
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Costs



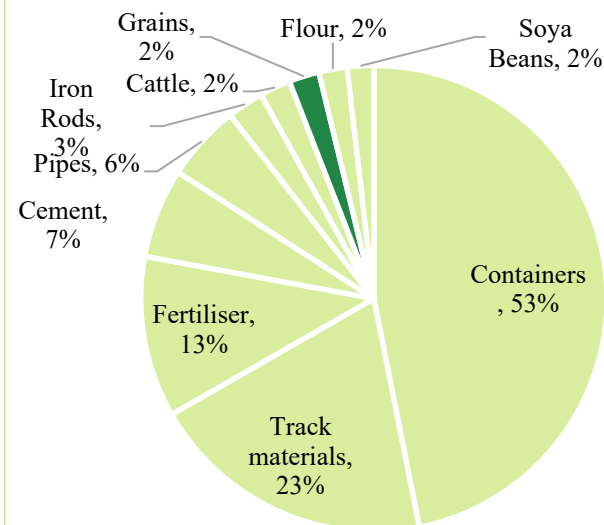
Costs – Rail transport costs

Rail transport cost has significantly reduced over the years creating an enabling environment for distribution and supply

Rail Transport prices in Nigeria



Rail Cargo Composition



Nigeria offers multiple cargo transport options, and the cost of transporting goods via rail has fallen in recent times

- Between 2015 and 2017, over 151,000 tons of cargo was transported by rail across Nigeria with containers (53%) constituting the largest share of rail cargo across the country. Grains on the other hand constituted only 2% of all cargo transported by rail in the same period.
- Over the last six years, the cost of transport via Nigeria's rail network has declined by 55.8%. This indicates an increasingly favorable transport environment that can be effectively leveraged by agricultural producers to transport their products across the country.

Source: The Nigerian Bureau of Statistics



Costs – Land transport costs

It costs an average of \$1,600 to haul a 30-ton truck from top sorghum-producing states to key processing/export regions



- Haulage prices in Nigeria vary according to the weight of products to be shipped, shipping distance, and to some degree, the security and infrastructural conditions of origin, routes and destinations of shipments.
- The cheapest haulage distance between top producing and processing/export region is between Zamfara and Kaduna where the Nigerian Breweries Kudenda Malting Plant is situated.

Cost of Haulage from Nigeria's Top Sorghum producing Regions to Key Export and processing Regions (December 2019)¹

Top Sorghum Producers in Nigeria	Kaduna (12.1% of total Nigerian Production)		Zamfara (11.9% of total Nigerian Production)		Borno (10.6% of total Nigerian Production)	
Top Destinations for malting or exports	Low Range	High Range	Low Range	High Range	Low Range	High Range
Lagos (Export channel and 1 malting plant)	\$1,250	\$1,514	\$1,200	\$1,453	\$2,061	\$2,494
Oyo (1 Malting Plant)	\$1,172	\$1,419	\$1,108	\$1,342	\$2,194	\$2,656
Ogun (2 Malting Plants)	\$1,267	\$1,533	\$1,242	\$1,503	\$2,364	\$2,861
Aba (1 Malting Plant)	\$1,256	\$1,533	\$1,547	\$1,872	\$2,172	\$2,628
Kaduna (1 Malting Plant)			\$853	\$1,031	\$1,094	\$1,325

Source: *Kobo 360 Price Estimator*



Key free trade and export processing zones in sorghum hotspots

The Nigerian government has set up export processing zones to facilitate industrial and export enterprises

	Sebore Farms Export processing Zone ¹	Maigatari Border Free Zone ²	Kano Free Trade Zone ³
Location	Mayo Belwa, Adamawa State	Maigatari, Jigawa State	Fanisau, Kano
Size	14,000ha	650	262ha
Setup Date	2001 (18 years)	2000 (19 years)	2001 (18 years)
Key sorghum producing region?	Yes	Yes	Yes
Approved Activities	• Agriculture and Agro related businesses • Manufacturing Extension deliveries • Warehousing, Freight forwarding and Customs clearance • International Commercial Arbitration Services • Other activities as approved by the NEPZA	• Setup and operation of manufacturing activities targeting export markets	• General industrial enterprise
Benefits	• Breaks from Federal, State and Local Government Taxes, Rates and Levies • Duty and tax free importation of raw materials, components, capital goods, customer goods and equipment • Availability of Raw Materials • Access To Experienced Business Consultants • Access to basic Civil Infrastructure, etc.	• Direct border access to neighboring countries • Adequate security and active presence of customs, immigration and the Nigerian military	• Proximity to Africa's largest grain market (Dawanau) with distribution networks reaching neighboring countries • Complete tax holiday from all FG taxes • Rent-free land for the first 6 months of construction • Presence of security personnel from the police, army, air force and civil defence corps

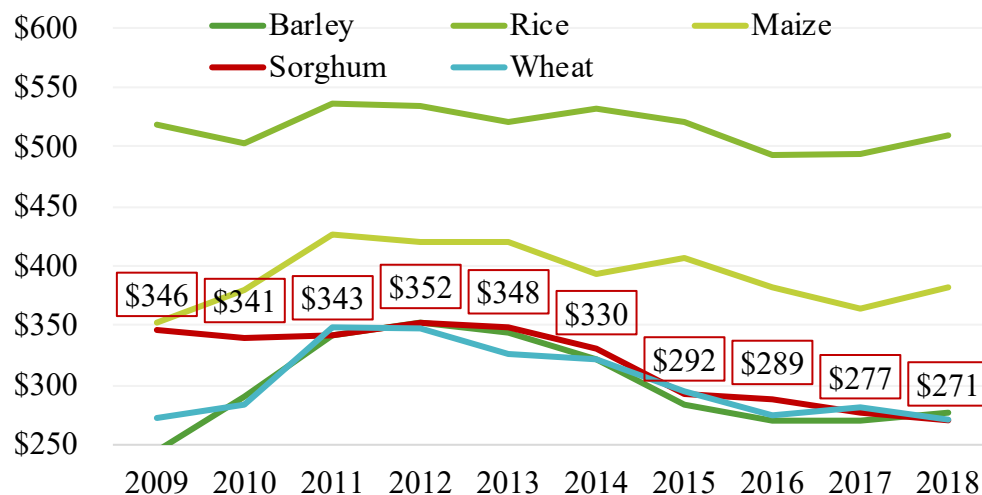
Sources: 1 – [Sebore Farms Export processing Zone](#); 2 - [Inside business](#); 3 – [Kano Free Trade Zone](#)



Sorghum prices

Falling sorghum prices offers significant opportunities for industrial players to improve production efficiency

Global Average Price of Sorghum (\$/tonne)¹



Highest and Least Sorghum Prices Globally (2018)¹ \$/tonne

Highest Sorghum Prices

Zambia	\$604
New...	\$543
Ghana	\$539
Rwanda	\$419
Togo	\$416

Least Sorghum Prices

Guinea	\$70
Bolivia	\$106
Paraguay	\$110
Oman	\$130
Republic...	\$134

\$201.82/tonne →

Wholesale Price of Sorghum
in Nigeria, Sep. 2019

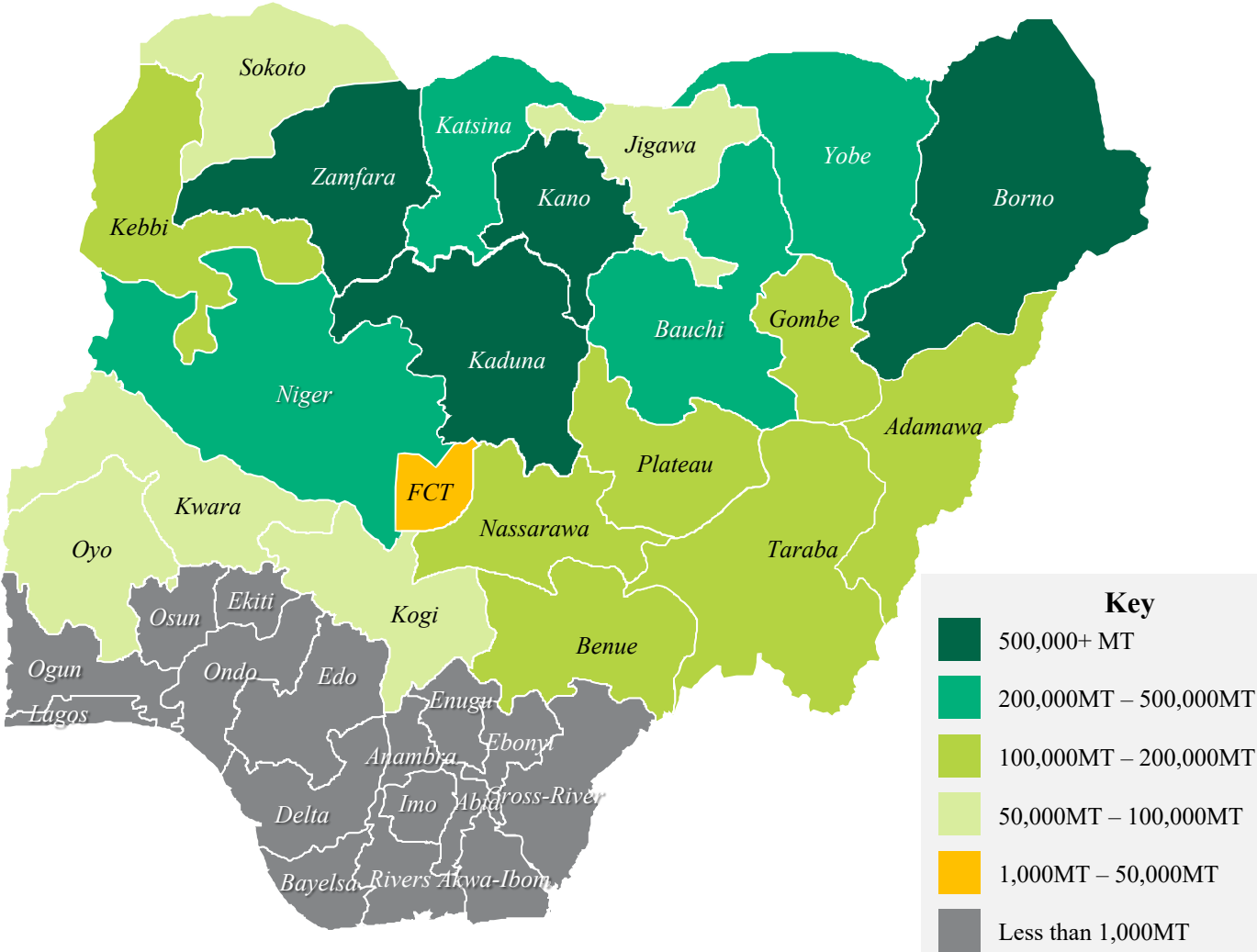
The fall in sorghum prices globally and in Nigeria puts industrial users of the crop at an advantage

- Globally, sorghum prices have been on a consistent decline over the last 6 years as a tonne of sorghum was 29% cheaper than maize and 47% cheaper than rice and therefore offers a cheaper substitute to these comparable grains.
- This trend is also true in Nigeria where wholesale sorghum prices have dropped by 52.5% from \$46.7 per 100kg in 2017 to \$22.2 per 100kg in September 2019.
- Falling sorghum prices and Nigeria's increasing production output implies cheaper sorghum-based raw materials for industrial players in the country.



98% of Nigeria's sorghum production is concentrated in the northern region of the country

Sorghum Production across Nigeria



Key Producing Regions

- Kaduna, Zamfara and Borno are the three largest sorghum producers in the country with contributions of 12.1%, 11.9% and 10.6% respectively as they are situated in the savannah ecological region which favors sorghum cultivation.



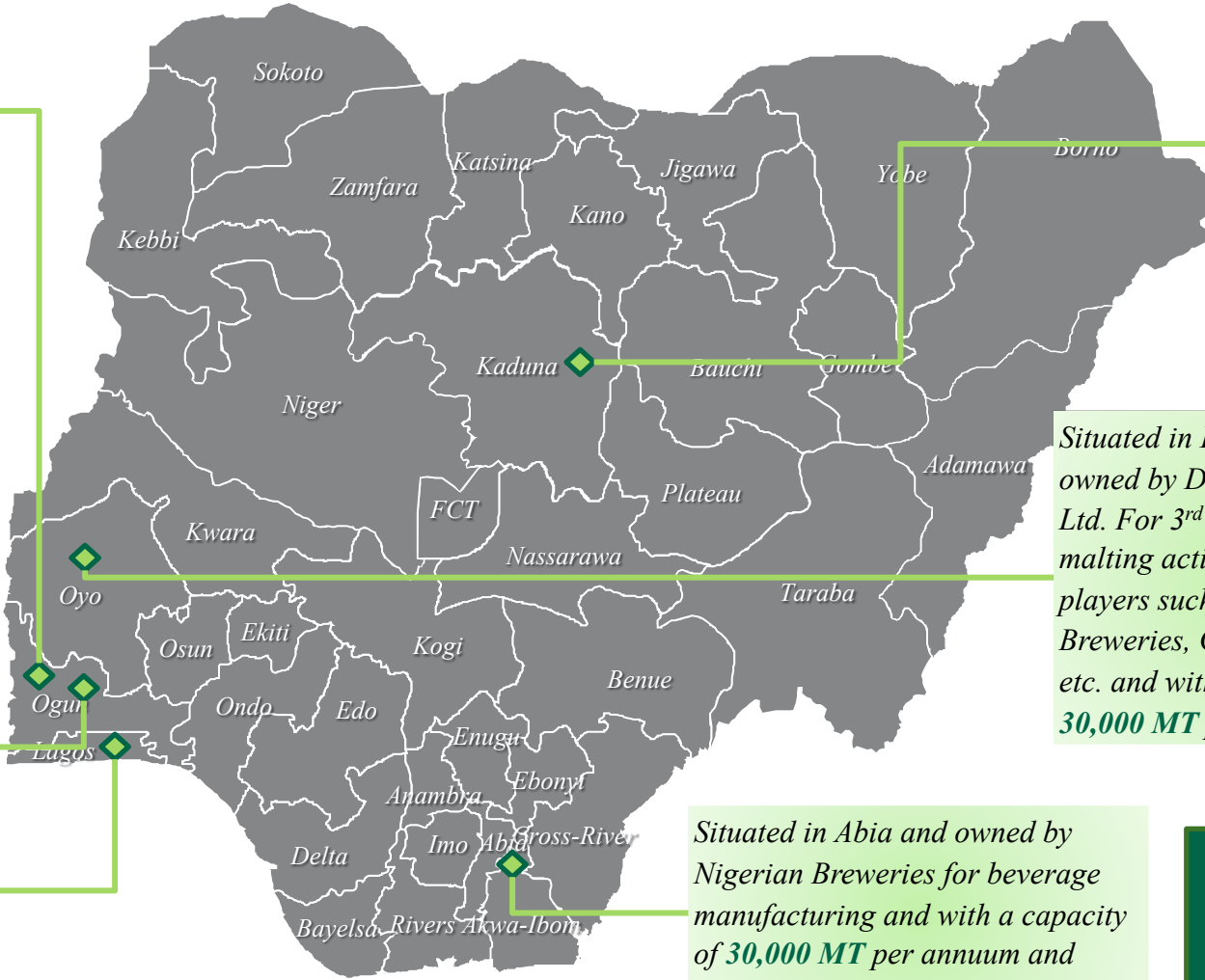
Nigeria has six sorghum malting plants with a total processing capacity of 116,000MT

Sorghum Malting Plants Across Nigeria

Situated in Ota, Ogun and owned by Food, Agro and Allied Industries for 3rd party sorghum malting and with a capacity of **25,000 MT** per annum and plans to grow to **33,000MT** per annum capacity

Situated in Ota, Ogun and owned by Taibod Ventures with a capacity of **9,000 MT** per annum

Situated in Apapa, Lagos and owned by Lifecare Industries for 3rd party malted sorghum production and with a capacity of **15,000 MT** per annum



Situated in Kudenda, Kaduna and owned by Nigerian Breweries for beverage manufacturing and with a capacity of **7,000 MT** per annum

Situated in Ibadan, Oyo and owned by Derivatives Industries Ltd. For 3rd party sorghum malting activities for key local players such as Nigerian Breweries, Guinness, Cadbury, etc. and with a capacity of **30,000 MT** per annum

Situated in Abia and owned by Nigerian Breweries for beverage manufacturing and with a capacity of **30,000 MT** per annum and plans to expand to **60,000 MT**

Total Local Sorghum Malting Capacity
116,000
MT/A

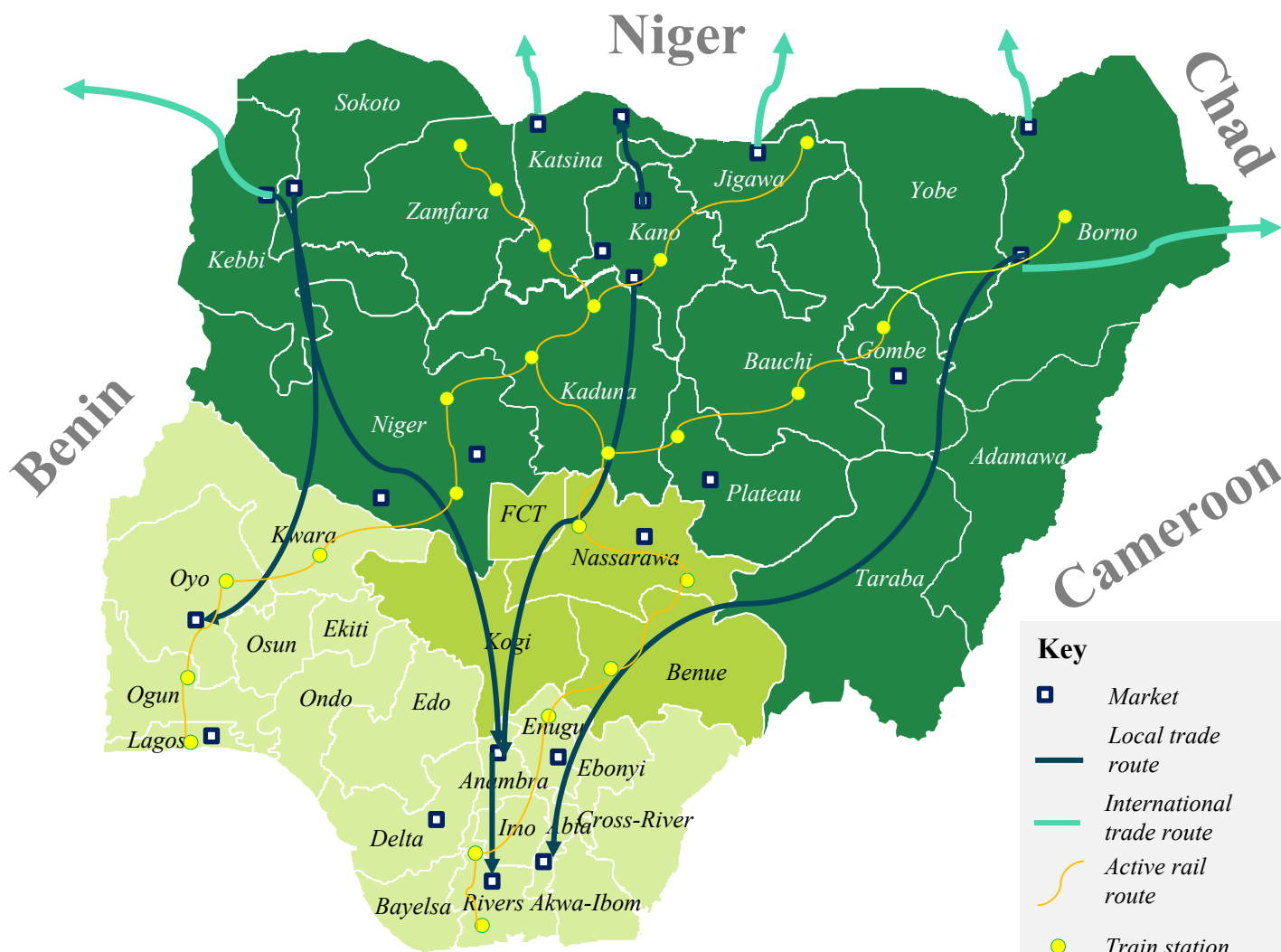
Sources: [Nigerian Breweries](#); [Lifecare Ltd.](#); [Food and Agro](#); [Derivatives Industries Ltd.](#);



Trade and route-to-market

Sorghum is widely-traded within Nigeria and key producing regions are within reach of existing rail networks

Route-to-market



Sorghum Trade Flows¹

- Majority of Nigeria's sorghum is traded at major markets within the country and of the 6.9MMT of sorghum that is produced in Nigeria in 2018, only 100KMT was exported
- These crops typically get transported by road and exports are primarily via the Kano-Katsina-Maradi Corridor
- The Dawanau market in Kano is the largest wholesale grain market in Africa and grains from neighboring countries are also traded here.

05.
Case studies



Nigerian breweries has recorded remarkable success in its efforts to incorporate sorghum into its industrial processes



Nigerian Breweries Plc.

Year of Establishment	1946 (73 years)	
Annual Turnover	\$972.9mn (2018)	
Number of Staff	3,777	
Value chain role(s)	Input and processing	
Company Footprint	Operates mainly in Nigeria but exports products to over 13 countries including United Kingdom, South Africa, Middle-East, West Africa and the United States of America.	
	Product Line	Brand/ Product
	Energy Drinks	Climax Energy Drink
	Lager	Star, Heineken, Gulder, Goldberg, Star lite, "33" export, Stella, Life, etc.
	Stout	Legend, Williams and Turboking
	Malt	Amstel Malta, Maltina, Maltex and Hi-Malt
	Ready to Drink	Roots, Rhythm, Desire and Star Radler
	Cider	Strongbow
	Soft Drinks	Fayrouz
Value Chain Strategy	• Provision of technical assistance to farmers in collaboration with USAID-MARKETS • Encouragement of the utilisation of mechanisation by small-scale farmers • Liaison with the Nigerian government in the formulation of sorghum policies • Development of hybrid sorghum varieties	
Results	• The acquisition of Sona Systems to improve the company's sorghum malting capacity in Kundenda, Kaduna • Average annual investment of \$274k in developing Nigeria's sorghum value chain • 24mn value addition to the Nigerian sorghum value chain and the creation of 50,000 jobs	

Sources: [Nigerian Breweries Sorghum Brochure](#); [Nigerian Breweries PLC.](#); [2018 Nigerian Breweries Financial Report](#); [FMDQ Securities Exchange](#)



Sorghum is a critical raw material for some of the world's largest food and drinks corporations

Some of the World's Largest Companies which utilise Sorghum in their products

Country	Name of Company	2018 Revenue	Industry Footprint	Product Category	Brand Names
China 	Kweichow Moutai Co. Ltd	\$10.46bn	over 26,000 employees,	Baijiu (alcoholic drink)	Kweichow Mountai liquors, Moutai Prince liquors, Moutai Ying Bin Chiew and Laimao liquors
	Sichuan Yibin Wuliangye Group Co.,Ltd.	\$3.5bn	Over 25,000 employees	Baijiu (alcoholic drink)	Wuliangye baijiu
The US 	AB InBev	\$54.6bn	Over 18,000 employees, \$1.5bn dollar investment in 2018 and a further \$2bn proposed in 2020 for brewing	Beer	Anheuser-Busch
	Mondelez International	\$25.9bn	Over 80,000 employees	Snacks	Enjoy life foods: mini chips, cookies and chocolates Cadbury : Oreo
	General mills	\$16.9bn	Over 38,000 employees with its product in over 100 companies	Cereal	Nature valley, Chex, Annie's, spoon bread
	Briess malt and drinks		First USDA certified organic malting company, First malting company in the world dedicated to the small-scale production of specialty malts for American Craft Beer	Alcohol	Briess American craft beer
UK 	Associated British Foods	\$20.77bn	Operational in 52 countries with over 138,000 employees	Grocery (Baked goods, beverage)	Dorset Cereals, Jordans, Ovaltine
Nigeria 	Nigerian Breweries	\$972.9mn	11 breweries, 2 malting plants with brands available in 13 countries	Alcoholic drinks	Gulder, Star, Heineken, Goldberg

A photograph of a sorghum field. In the foreground, a single sorghum seed head is in sharp focus, showing its dense, orange-brown grains. The background is a blurred field of similar plants under a clear blue sky, with some distant hills visible.

06.

Applicable incentives and regulatory agencies



Applicable incentives

The Nigerian government has put into place various tax incentives to encourage businesses in the Agriculture Sector

Tax Type	Corporate Income Tax (CIT) - 30%	Value Added Tax (VAT) – 5% (7.5% from 2020)	Import and Export Duties - 5% - 35%	Capital Gains Tax (CGT) - 10%
Brief Description	Levied on profits of companies accruing in, derived from or received in Nigeria.	Consumption tax paid when goods are purchased and services rendered.	Payable on goods imported into or exported from Nigeria.	Payable on capital gains accruing to companies or individuals making a chargeable disposal of asset.
Sector Specific Incentives	- Pioneer status 95% capital allowance in year qualifying expenditure is incurred - Indefinite carrying forward of unutilised capital allowance - Exemption from payment of minimum tax.	VAT exemption on tractors, plough and implements purchased for agricultural purposes, fertiliser, locally produced agricultural and veterinary medicine, farming machinery and transport equipment.	Tariff based incentives on Agro-allied, agro-processing and agricultural commodities and 0% Import duty on agriculture equipment and machinery.	Rollover relief: Deferment of payment of capital gains tax when disposal proceeds are used for the purchase of land and agricultural machinery of the same class within 12 months of disposal of the old asset.
Other Non-tax Related Incentives	Agricultural Credit Guarantee Scheme Fund: Provides guarantees of up to 75% for loans granted by banks for some agricultural purposes. Agricultural Credit Support Scheme: Provides access to affordable agricultural credit at 8% to 14% interest rates which are well below the commercial interest rates of 20%+ Commercial Agriculture Credit Scheme: Provides affordable credit to Nigeria's agricultural value chain players at a maximum interest rate of 9%.			

Sources: [Compendium of Investment Incentives in Nigeria](#); [Central Bank of Nigeria](#)



The Federal Ministry of Agriculture and Rural Development (FMARD)¹

The Federal Ministry of Agriculture and Rural Development is the ministry in charge of Nigeria's agriculture sector.

It is responsible for the formulation and execution of: policies, strategies as well as the development of strategic partnerships with key stakeholders such as state and local governments, other ministries, private sector players and farmer groups and civil society among others.

Recently, the Nigerian Federal Government, through the FMARD launched the agricultural transformation agenda which is aimed at sustainably increasing smallholder farmers' and agro-entrepreneurs' incomes across the country.



The Federation Of Agricultural Commodity Association of Nigeria (FACAN)²

FACAN is a Private Public Partnership with the federal government and operates as the apex body for agricultural commodity associations in Nigeria.

It works with agricultural extension organisations to identify new production areas, attract farmers, distribute seeds and provide agricultural information.



Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL)³

NIRSAL was set up and wholly owned by the Central Bank of Nigeria and is aimed at redefining, dimensioning, measuring, reprising and sharing agribusiness risks for players along the Nigerian agriculture value chain.

The bank has a \$500mn capitalisation and is mandated to facilitate the flow of affordable financing to the country's agriculture sector by reducing associated risks and building long-term capacity.



The National Agricultural Seeds Council⁴

NASC is responsible for the development of programmes and policies regarding the Nigerian seed industry, including activities relating to research, seed registration, production, marketing, trade and consumption of seeds in Nigeria.

It is also in a unique position to advise the Federal Government on organisation, management and financing of seed programmes as well as changing pattern of seed demand and farmers' needs in the country.

A photograph of a sorghum field. In the foreground, a single sorghum seed head is in sharp focus, showing its dense, golden-brown grains. The background is a blurred field of similar plants under a clear blue sky, with some distant hills visible.

7. Call to action

Services to UK Investors

The UK government provides multiple strands of support for UK companies looking to invest in these countries and the broader Africa region.

This includes, but is not limited to:-

- Advice & guidance on market entry, including introductions to country government officials, advice on consultants, any joint venture partners, information on legislative and political risk issues, including managing corruption.
- Financing (debt & equity) including long term patient capital from UK's Development Finance entity – CDC and other development finance institutions
- Overseas Investment Insurance
- Training & linkage development with local input suppliers
- A new UKAid programme, FDI Africa, that will offer transaction facilitation services in due course including for Nigerian investments.

For further information on the full suite of UK support available to your firm please contact:

Department for International Development GrowthGateway@dfid.gov.uk

The DIT Africa Trade Services Unit (TSU) - DIT.Africa@fco.gov.uk

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**NIGERIAN
INVESTMENT
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