



CHALLENGES AND STRATEGIES OF WHEAT PRODUCTION IN NIGERIA AMIDST GROWING DEMANDS FOR WHEAT AND WHEAT PRODUCTS

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ABSTRACT

The growing local demands for wheat products due changing taste of the population consistently create gap in local production resulted in huge import, making wheat a strategic crop to the country. The objective of this study is to assess local production and import in Nigeria, challenges devilling wheat production and strategies employed by various stakeholders to encourage local wheat production. The study uses secondary data obtained from Food and Agriculture Organization of the United Nations (FAO) to assess local production and import, while available literature was reviewed for challenges devilling wheat production and the strategies employed to encourage local production by stakeholders. The study revealed that, local wheat production is stagnated while import is increasing, and the value of import increased by 66.5% between 2016 – 2020. The challenges of wheat production in Nigeria ranges from unfavourable climatic conditions, limited access to improved seed varieties, high cost of production, inadequate irrigation infrastructure, insufficient funding systems, lack of a cohesive national strategy on wheat development, and the unclear role of various stakeholders among others. The need for improved security, stable and consistent Government policies, encourage mechanization, fostering collaborations among stakeholders, increased investment in research and training, expansion of irrigation land and facilities and increase farmers access to credit are the major strategies suggested to boost local wheat production.

Keywords: Wheat; wheat products; importation

INTRODUCTION

Wheat is the second highest contributor to the Nigeria's food import bill, putting pressure on the country's foreign reserve as over \$2bn was spent annually on the importation of over five million metric tonnes of wheat (CBN, 2021). Wheat importations by flour millers averaged 4.7 million tons per year over the last few years (FAO, 2020). Nigeria's total local wheat production in 2020 was about 200,000 metric tonnes (WFAN, 2021), which was lower than expected mainly due to harsh weather conditions and poor seed varieties available.

Wheat production is concentrated in the northern parts of Nigeria grown by small scale framers in a modest scale. Following, the construction of large-scale irrigation dams in

the 1970s production of wheat began on a relatively commercial scale despite farmers having poor knowledge on improved wheat production practices (NAERLS, 2004). The growing local demand of wheat products due to changing taste of the population in favour of wheat products consistently create gap between demand and local production resulted in huge import of wheat into the country. More Nigerian households currently recourse to wheat derivative foods to meet their dietary needs more than ever before owing to low cost, convenient staple of baked foods from wheat products (Falola *et al.*, 2017). Key food staples such as semolina, bread, noodles, and pasta among others are produced from wheat flour and form a regular part of meals in most urban and rural households across the country. Wheat is used in making foods such as bread, cookies, cakes, biscuits, spaghetti/pasta and different types of noodles. In Nigeria, it is also used for making local foods such as *Taliya*, *Gurasa*, *Tuwo*, *Alkaki*, *Fura*, *Algaragis*, *Alkubus*, *Danwake* among others.

Although there are challenges hindering the production of wheat in Nigeria, the crop has become strategic to the country and the Government in conjunction with private sector, development partners and some NGOs are rolling out strategies to boost wheat farming on a large scale. This study assessed challenges and strategies toward increase local production of wheat in Nigeria. Therefore, the objectives of this study were to assess local production and import in Nigeria between 2016 – 2021, to discuss challenges deviling wheat production in Nigeria and to outline strategies employed by various stakeholders to encourage local wheat production.

METHODOLOGY

The study used secondary data accessed from FAO to assess local production, import and monetary value of between 2016 - 2020. The study reviewed available literature to outline challenges devilling wheat production in Nigeria and the strategies employed to encourage local production by both government and other stakeholders.

RESULTS AND DISCUSSION

Local Production and Import of Wheat in Nigeria

Between 2016 – 2020, local wheat production ranged between 55,000 - 67,000 tonnes while the import quantities ranged from 4.2 - 5.9 million tonnes. The lowest local production and the highest import quantities were recorded in 2020 (55,000 and 5.7 million tonnes, respectively). Similarly, the ratio of local production to import progressively declined from 1.41% in 2016 to 0.93% in 2020 (Table 1). The marginal increase or decrease of local production during the study period cannot be compared with the values recorded by Ethiopia, another sub-Saharan African country which saw increased local wheat production from 4.5 to 5.5 million tonnes over the same period (FAOSTAT, 2021). The implication for this saw Nigeria wheat imports progressive rose during the study period. This suggests failure on the part of the government to focus on encouraging local wheat production as it does in the rice subsector which recorded increased local production from 4.2million tonnes in 2015 to 5.5million tonnes in 2020 (FAOSTAT, 2020) and a decline in rice import from 2.2 million tonnes in 2011 to 0.85 million tonnes in 2019 (FAOSTAT, 2019).

Table 1: Local wheat production and import in Nigeria 2016 – 2020

Year	Production (tonnes)	Import (tonnes)	% Local Production
2016	60,000	4,240,715	1.41
2017	67,000	5,575,075	1.20
2018	60,000	4,810,412	1.25
2019	60,000	4,660,255	1.29
2020	55,000	5,902,528	0.93

Source: FAOSTAT (2021)

Figure 1 showed the value of wheat import into Nigeria between 2016 - 2020. The value rose from 0.98 billion USD in 2016 to 1.48 billion USD in 2020 representing an increase in 66.2%. A slight drop of 13.5% of import value was recorded between 2017 and 2019.

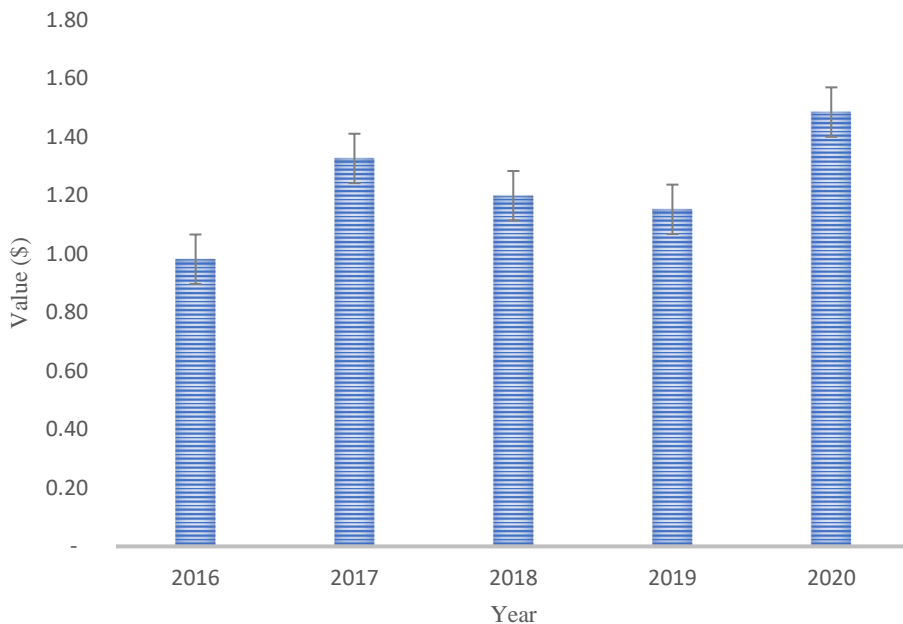


Figure 1. Value of wheat imported into Nigeria 2016 – 2020

Challenges of Wheat Production in Nigeria

Review of relevant literature and the information obtained from Wheat Farmers Association of Nigeria (WFAN) revealed that the challenges facing wheat production in Nigeria range from unfavourable climatic conditions, limited access to improved seed varieties, high cost of production, inadequate irrigation infrastructure, insufficient funding

systems, lack of a cohesive national strategy on wheat development, and the unclear role of various stakeholders among others. These challenges are further discussed below:

- i. **Unfavourable climatic conditions:** Dry season with its accompanied low temperatures is the most suitable climate for wheat production. Non-availability of water and poor irrigation facilities militated against wheat production during dry season. Although, rainfed wheat can be grown in Jos and Mambila plateaus due weather condition of those areas but the potential to do so has not yet been explored. Lake Chad Research Institute, the institute with the national mandate for research on wheat conducted several trials and found those areas as suitable for rainfed wheat production (Olugbemi, 1990). Nigeria's climate is unsuitable to grow hard red winter wheat used for making bread and general-purpose flour. Instead, Nigeria grows hard wheat, which is bred for the tropical climate. It is heat tolerant and can be grown in many of the northern Nigerian states. However, hard wheat has lower gluten content than hard red winter wheat, making it ill-suited for bread (Olugbemi, 1990).
- ii. **Limited access to improved varieties:** Although high-yielding varieties have been released in Nigeria by Lake Chad Research Institute especially the Norman variety, supply is extremely limited, and most farmers do not have access to these seeds. In addition, wheat is an open-pollinated crop, new varieties are often needed every two years to sustain production and keep the farmers in production (WFAN, 2021).
- iii. **Inadequate irrigation infrastructure:** Wheat production is limited by poor irrigation infrastructures, almost all wheat in Nigeria have been grown during dry season (harmattan) in northern states to benefit from cooler temperatures. During this time, there is little or no rain, so irrigation is required for successful wheat production. Many irrigation facilities have fallen into disrepair and limit the prospects for expansion of wheat production (Falola *et al.*, 2017).
- iv. **Low yield wheat production:** Nigerian wheat yields are no more than 2 tons per hectare, according to Food and Agricultural organization (FAO, 2020). This is significantly lower than irrigated wheat production in other countries, including Mexico at 5.1 tons per hectare, India at 3.4 tons and Sudan at 2.5 tons. Low yields also lead to much higher prices in the local market as compared to imports, which makes it difficult for millers to buy local wheat while also keeping flour prices sustainable for Nigerian consumers.
- v. **Insecurity in Nigeria's wheat belt:** The challenge by insurgency in the North-East which grows significant percentage of Nigeria's wheat disenfranchise the area resulted in the majority of wheat farmers fled their farms and settled in camps as internally displaced persons.
- vi. **Lack of mechanized and modernized farming techniques:** lack of mechanized and modern farming techniques. Wheat farming in Nigeria is predominantly carried out by small-scale farmers who have outdated skills and limited access to improved production practices.
- vii. **Climate change vagaries:** Unstable weather conditions and climate change create additional challenges, which sometimes affect the planning and forecasting of wheat production (Bamiro *et al.*, 2020).
- viii. Other challenges include uncompetitive pricing, insufficient funding systems for research, lack of a cohesive national strategy on wheat development, unclear role of various stakeholders and high cost of production (Danbazau *et al.*, 2021).

Strategies for Increasing Local Wheat Production

- i. **The need for stable and consistent Government agricultural policies:** Formulating sound policies on bridging the gap between domestic demand and supply of wheat in Nigeria and making it self-reliant in wheat production requires a deep knowledge of wheat value chain and the actors.
- ii. **Encouragement of mechanization:** This can be done by clustering wheat farmers so that mechanized services can be offered in a cost-effective way. Various levels of government may partner with manufacturers of threshers, reapers, tractors, seeders, etc. Focus on low-cost machines that are easy to repair locally is critical to success. Financing will be required to enable entrepreneurs to establish these mechanized services as sustainable businesses.
- iii. **Foster strong collaborations between stakeholders:** it is crucial that the various stakeholders work harmoniously towards achieving the goal of increased sustainable local wheat production. Stakeholders within the wheat value chain must have shared vision for sustainable wheat farming and roles of all stakeholders will be clarified, Example of such collaboration include that of Flour Milling Association of Nigeria and Oxford and Babban Gona to boost wheat production through its out-growers scheme for 8,000 smallholder farmers in Kano, Jigawa, and Kebbi, (BusinessDay 2020)
- iv. **Investment in research and training:** Nigeria has to invest in research into new and improved wheat farming techniques and modern agronomy practices in order to improve crop yield and expand wheat production. Rapid release of improved varieties and from the research system, especially Lake Chad Research Institute is needed, and a much greater supply of foundation seed for seed production to ensure farmers have access to these new varieties. Regular and widespread trainings of extension agents is critical to ensure that this research leaves the laboratories rapidly and significantly affects farmers' lives.
- v. **Improved security:** The security situation in the northern regions of the country also needs to be addressed.
- vi. **Guaranteed market and attractive prices:** Nigerian consumer price preference has to be satisfied. A minimum purchasing price, which is competitive against international prices, needs to be determined. This will ensure that local wheat produce stays cheaper in the Nigerian market.
- vii. **Expansion of irrigation land and facilities:** The Federal Ministry of Water Resources, and state ministries for agriculture need to increase investment for modernization of irrigation infrastructure in the states. Farmers need to be motivated to own boreholes to expand area for wheat production
- viii. **Increase farmers access to credit:** From the Central Bank of Nigeria, credit access for wheat farmers is needed, in terms of large-scale inclusion of wheat in major agricultural credit schemes through public and private financing providers. Credit programs for wheat farmers should include a partnership with local governments and traditional leaders as well as adequate technology and processes for registering and tracking loans to farmers to ensure repayment and sustainability. NIRSAL can play a key role in de-risking and catalyzing lending to players in the wheat value chain.
- ix. Finally, the State Governments, as the closest link to farmers, are needed to make more land available to farmers and to ensure timely availability of inputs, proper

extension or training of farmers by ensuring farmers receive the latest information on wheat agronomy.

CONCLUSION

Despite all odds, Nigeria has the potential to increase local wheat production if the key challenges of limited access to improved seeds, inadequate irrigation facilities, lack of mechanization and general insecurity in the mainly wheat production zone of the country are addressed adequately. Research efforts need to be encouraged to develop improved varieties and to mitigate effects of climate change. The lack of a cohesive national strategy on wheat development and unclear role of various stakeholders in the wheat value chain can be addressed by putting in place a clear definition of individual roles, strong partnerships and alignment in policies and actions of various stakeholders involved in wheat sector in Nigeria.

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