



**CONSTRAINTS OF CASSAVA FARMING IN SOUTH-SOUTH, NIGERIA: A CASE OF
CASSAVA CORPORATIVE FARMERS**

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ABSTRACT

The study examines the constraints faced by cassava cooperative farmers in the South-South region of Nigeria, focusing on three states: Akwa Ibom, Delta, and Edo. Multi-stage sampling was used to select 300 cassava corporative members for the study. Descriptive analysis was used for the study. The result identifies lack of capital/finance as the most significant challenge, with a mean score of 4.81 across the states. Other critical issues include labor shortages (3.43), poor transportation infrastructure (3.47), low market prices (4.33), high processing costs (3.74) and inadequate government support (4.62). The study underscores the interrelated nature of these challenges, which collectively undermine the profitability and sustainability of cassava farming in the region. To address these constraints, the study recommends improving access to affordable credit, enhancing rural infrastructure, developing stronger market linkages, and stabilizing cassava prices through policy interventions. Additionally, strengthening government support, promoting agricultural mechanization, and empowering cooperative societies are crucial steps toward improving the productivity and economic viability of cassava farming. These recommendations aim to provide a comprehensive approach to overcoming the barriers faced by cassava cooperative farmers, thereby enhancing food security and rural development in South-South Nigeria.

Keywords: Cassava, Cooperative, Constraints, farmers and Region

INTRODUCTION

Cassava (*Manihot esculenta*) is a woody perennial shrub with roots that are edible which grows in both tropical and sub-tropical areas of the world. The origin of cassava is tropical America and was introduced into Africa for the first time in the Congo basin by the Portuguese around 1558. Cassava is known to support the livelihood of over 300 million Africans (International Institute of Tropical Agriculture [IITA], 2021). Nigeria is known as one of the largest producers of cassava in the world, while Thailand is the largest exporting country of dried cassava and in the subtropical region of Southern China, Cassava is the fifth largest crop produced (Akerele *et al.*, 2018). In sub-saharan Africa, cassava is largely a subsistence crop grown for food by small-holder farmers who sell the surplus. It has the advantage of growing well in poor soils with limited requirement for labor and provide food security during periods of uncertainty and conflicts. Usually, cassava is intercropped with vegetables, yam, melon, maize, groundnut, coffee, sweet potatoes or other legumes (IITA, 2021).

In Africa, cassava is the second most important staple food after maize. It is a major source of calories for almost two out of five Africans. Some households in Nigeria consume cassava daily and sometimes more than once a day. Cassava is eaten with sauce made with ingredients that are rich in protein, minerals and vitamins. In the Congo, Zambia, Madagascar, Tanzania and Sierra-Leone, cassava leaves are eaten as vegetables (Haggblade and Zulu, 2003). In the Republic of Congo, cassava is said to contribute more than one thousand calories per person per day. Cassava leaves are rich in minerals, protein and vitamins (FAO, 2022). Cassava roots are usually harvested between 8month and 3years after planting. Most often small-scale farmers are the ones who grow



cassava in Nigeria planting between 1 and 5 hectares. Majority of the cassava produced in Nigeria are processed into *Garri* and *Fufu* usually consumed by a significant number of ethnic group across the country. Nigeria is said to be the largest importers of wheat to the tune of \$4million each year. Determined to promote self-sufficiency various Nigerian governments have been promoting the usage of cassava flour as a partial substitute for wheat import (Abayomi and Adegoke, 2016).

Cassava is one of the most important food crop in Nigeria. It grows to a height of 1 to 3 meters and more than a root can be found on each plant. The leaves can be consumed but the main harvested organ is the tuber which is normally the swollen root. Cassava is propagated from stem cuttings. Cassava offers a carbohydrate production of about 40% than rice and 25% than maize. Among the starchy staples, cassava is the cheapest source of calories for both animal feeding and human nutrition (Akinagbe, 2010). Beside food, cassava starch and derivatives are used in numerous types of products such as food, sweeteners, textile, confectionery, glues, plywood, monosodium glutamate, bio-degradable products and drugs. Cassava pellets and chips are utilized in animal feed and alcohol production (IITA, 2021). Cassava products are fast becoming popular in Nigeria food and agricultural markets. It offers very strong incentive for more economic agents to get more interested and be practically involved in cassava market. According to FAO (2018) cassava is considered to be a choice crop for rural development, poverty eradication, economic growth and development and ultimately, food security.

Ikuemonisan *et al.* (2020) stated that essential importance and usefulness of cassava has prompted stakeholders to continue to contribute significantly to shapen the development of the sub-agricultural sector in Nigeria. Eke-Okoro and Njoku (2012) revealed the phases in efforts to enhance cassava production in Nigeria as the emergent stage that spread from 1940 to 1953; a primitive stage that extended from 1970 to 1990 and anticipatory stage that spanned from 1995 to date. Cassava contains calcium (500mg/100g), vitamin c (25mg/100g) and phosphorus (400mg/100g). it is also a source of protein and rich in amino acid (lysine). It consist of 15% peel and 85% fresh tuber flees. Cassava tuber consist 20-30% starch, 62% water content, 2% protein, 1-2% fiber with trace of vitamins and minerals (FAO, 2001). The varieties of cassava are categorized as either bitter or sweet depending on the presence or absence of highly toxic level of cyanogenic glycosides which are lotaustralin and linamarin respectively (Akerere *et al.*, 2018).

The global production of cassava has been on the increase since 2010 from around 240million metric tons. Nigeria produced 42.5million metric tons within the same period which is estimated to be about 18% of total world production. Nigeria's share of global production rose to 21.5% in 2018 indicating an impressive improvement. FAO projected that by the year 2025; about 62% of global cassava production will come from sub-Sahara Africa (FAOSTAT, 2020).

To meet this target, there is increasing need for attaining sustainable food production in Nigeria today. So much effort is been exerted at having appropriate structure for organizing small-holder farmers towards attaining sustainable food production (Oyido, 2007). Agricultural cooperative society has been considered as a veritable tool or vehicle in achieving this; for harnessing and pooling together the resources of small-scale farmers to optimize the benefit of large scale production (Ukeje, 2008). Agricultural Cooperative Societies as stated by Omotesho (2008) is one of the most potent tools for mobilizing production resources for accelerated rural development. It is a known reality that small-holder farmer capacity demand of the peasant's production cannot cope with technological and capital demand of modernized agriculture.

Agricultural Cooperative have been in existence over the years to play essential roles in agriculture aimed at attaining sustainable food production and upliftment in the welfare of farmers



(Ugururedo, 2008). In addition, according to Uchendu (2008) the original idea for organizing cooperative in Nigeria was from agriculture precisely from the marketing of cash crop for exports. Thereafter, cooperative development in Nigeria has assumed varying forms and dimensions. Agricultural cooperative has been playing very important part in the development of the Nigeria economy. It impact better farm yield and as a result yield better standard of living, better education for members and their family and better housing. Economic progress of agricultural cooperative has been documented profusely in most cooperative studies (Akinyele, 2009). Agricultural Cooperative support improvement in food production and invariably the level of living of farmers. It is also targeted at improving both the qualities and quantities of food produce. However, this significant role has not been without challenges. This study examines these challenges and proposes possible solutions to help cassava corporate members.

METERIALS AND METHODS

The study was carried out in the South-South of Nigeria. The South-South comprises of six (6) states namely: Akwa Ibom, Bayelsa, Cross-River, Delta, Edo and Rivers.

Sampling Technique

A multistage sampling procedure was used to select the sample of the study. The first stage was simple random sampling of 50% of the states that is three (3) States (Delta, Edo and Akwa Ibom) in South-South. The second stage was random selection of ten (10) cassava cooperative societies from the list of cassava cooperative farmers societies that are registered with the state's Ministry of Industry, Business, Trade, Investment and Cooperatives; which are saddled with the responsibility of registration of cooperative societies in the states and we obtained a total of thirty (30) cassava cooperative farmers societies which constituted the sampling frame. The third and last stage was simple random sampling of ten (10) cassava cooperative farmers (members) from the list of each of the 30 cassava cooperative societies that were selected in the second stage (sampling frame) and we sampled a total of 300 cassava cooperative farmers (members).

Method of Data Collection and Analysis

Data was collected using a structured questionnaire while a Likert scale with a decision mean of 3.0. Descriptive statistics was used for data analysis.

RESULTS AND DISCUSSION

Constraints Faced by Cassava Cooperative Members

The mean score of 4.81 across the states for "Lack of capital/finance" highlights this as the most pressing constraint. This aligns with recent studies, such as those by Ezeh and Chukwuemeka (2022), which underscore the chronic undercapitalization in agricultural cooperatives across Nigeria. The lack of access to affordable credit has been identified as a significant barrier to improving productivity in cassava farming, where the capital is crucial for purchasing inputs like fertilizers and hiring labor.

Labor shortages were considered "Serious" (S) across the board, with a mean score of 3.43. This issue has been exacerbated by urban migration, which depletes the rural labor force, as noted by Adebayo and Onu (2021). The mechanization gap in Nigeria's agricultural sector also plays a role here, with many smallholder farmers relying heavily on manual labor, making them vulnerable to labor shortages. Similarly, transportation issues received a "Serious" remark, with a mean score

of 3.47. This reflects ongoing challenges with rural infrastructure, particularly the poor condition of roads that impedes access to markets. A study by Iyangbe and Orewa (2021) points to the direct impact of transportation difficulties on the profitability of cassava farming, as it increases post-harvest losses and reduces market access.

Furthermore, the "Low market price of the product" was also considered serious, with a mean score of 4.33. This is corroborated by Ezedinma *et al.* (2020), who note that cassava farmers often face volatile market prices, partly due to limited value addition and market linkages. The global cassava market is highly competitive, and without strong domestic processing industries, Nigerian farmers often sell their produce at low prices.

With a mean score of 3.74, the "High cost of processing" is a significant issue. This constraint is well-documented in the literature, including by Onwuka and Nwaru (2021), who explain that the high cost of energy and inadequate processing facilities contribute to increased processing costs, reducing the profitability of cassava farming. Also, "Lack of government assistance" scored 4.62, indicating a serious constraint. This finding is supported by studies such as those by Adesope and Nnadi (2021), which highlight the inconsistent and often insufficient government support for smallholder farmers. This includes both financial aid and extension services, which are critical for improving farm productivity.

The high cost of transportation, with a mean score of 3.98, is another serious issue. As observed by Adepoju *et al.* (2022), transportation costs in Nigeria are driven by poor infrastructure, fuel prices, and long distances to markets, all of which significantly affect the profitability of agricultural enterprises. The lack of processing facilities was also considered serious, with a mean score of 3.45. This is consistent with the challenges highlighted by Nweke and Ugwu (2021), who discuss the limited availability of processing units, particularly in rural areas, which forces farmers to sell raw cassava at lower prices rather than processed products.

Table 1: Constraints Faced by Cassava Cooperative Members

Constraints	Akwa-Ibom		Delta		Edo		Total	
	Mean	Remark	Mean	Remark	Mean	Remark	Mean	Remark
Lack of capital/finance	4.81	S	4.90	S	4.70	S	4.81	S
Theft	1.97	NS	2.18	NS	2.09	NS	2.08	NS
Lack of labor	3.23	S	3.59	S	3.48	S	3.43	S
Poor means of transportation	3.26	S	3.55	S	3.62	S	3.47	S
Low market price of product	4.54	S	4.40	S	4.06	S	4.33	S
High cost of processing	3.82	S	3.73	S	3.68	S	3.74	S
Lack of government assistance	4.68	S	4.76	S	4.41	S	4.62	S
High cost of transportation	3.93	S	4.07	S	3.93	S	3.98	S
Lack of processing facilities	3.59	S	3.39	S	3.38	S	3.45	S
Poor technical extension service	4.38	S	4.51	S	4.24	S	4.38	S
Grand Mean	3.82	S	3.91	S	3.76	S	3.83	S

Source: Field Survey, 2024

Key: S=Serious; NS=Not Serious

Finally, "Poor technical extension service" was identified as a serious issue, with a mean score of 4.38. This aligns with the findings of Omotayo and Oladele (2020), who emphasize the critical role of extension services in disseminating agricultural innovations and best practices. The inadequacy of these services limits farmers' ability to improve productivity and adapt to new technologies.

Meanwhile, "theft" was perceived as "Not Serious" (NS) across all states, with the lowest mean score of 2.08 overall. This finding is consistent with the literature that often cites theft as a



less critical issue in comparison to financial constraints and market challenges in cassava farming. For instance, Ogungbile *et al.* (2021) observed that while theft occurs, it is generally not as detrimental as other factors like poor infrastructure and lack of finance.

CONCLUSION AND RECOMMENDATIONS

The most critical challenge identified across the three states (Akwa Ibom, Delta, and Edo) is the "Lack of capital/finance," with a grand mean score of 4.81, indicating that financial constraints severely limit the ability of farmers to invest in necessary inputs, technology, and labor. This finding aligns with the broader literature, which consistently emphasizes the undercapitalization of smallholder farmers as a major barrier to agricultural productivity in Nigeria. Other serious constraints include labor shortages, poor transportation infrastructure, low market prices for cassava products, high processing costs, and a lack of government assistance. These challenges are interlinked, creating a cycle of low productivity and limited profitability that undermines the economic viability of cassava farming. The lack of adequate processing facilities and poor technical extension services further exacerbate these issues, limiting farmers' ability to add value to their produce and adopt improved farming practices. In contrast, theft was perceived as a less serious issue, suggesting that while security concerns exist, they are not as pressing as the economic and infrastructural challenges faced by cassava cooperative farmers. Based on the findings of this study, the following recommendations are proposed to address the constraints faced by cassava cooperative farmers in the South-South region of Nigeria:

- (i) **Improved Access to Finance:** There is a critical need to enhance access to affordable credit for cassava farmers. Government agencies, financial institutions, and development partners should collaborate to create tailored financial products that meet the specific needs of smallholder farmers. This could include low-interest loans, grants, and other forms of financial support that can help farmers invest in necessary inputs and technologies.
- (ii) **Infrastructure Development:** Improving rural infrastructure, particularly transportation networks, is essential to reduce the cost and time of transporting cassava to markets. This would not only increase the profitability of cassava farming but also reduce post-harvest losses. Government investment in road construction and maintenance in rural areas is crucial.
- (iii) **Market Development and Price Stabilization:** To address the issue of low market prices, it is important to develop stronger market linkages and value chains for cassava products. Establishing processing facilities closer to farming communities can help farmers add value to their produce, thereby increasing their income. Additionally, policies aimed at stabilizing market prices, such as price support mechanisms, could protect farmers from market volatility.
- (iv) **Government Support and Policy Intervention:** The study underscores the need for more consistent and robust government support for cassava farmers. This includes not only financial assistance but also the provision of technical extension services that can help farmers adopt modern farming practices and improve productivity. The government should also work to create a more favorable policy environment that encourages private sector investment in the cassava value chain.
- (v) **Labor and Mechanization:** Addressing labor shortages requires a two-pronged approach: first, by creating incentives to retain and attract labor in rural areas, and second, by promoting the mechanization of cassava farming. Mechanization can help mitigate the impact of labor shortages and improve overall productivity.



- (vi) Strengthening Cooperative Societies: Strengthening the capacity of cassava cooperative societies can play a key role in overcoming some of the identified constraints. Cooperatives can be empowered to provide more effective support to their members through better access to finance, training, and market information. This would enable farmers to better pool resources and achieve economies of scale.

REFERENCES

- Abayomi, L. and Adegoke, A. (2016). Increasing Performance of the Cassava Industry in West and Central Africa Region (IPCI): High Quality Cassava Flour (HQCF) CASE Study report. IFAD- Draft, 1-45.
- Adebayo, O. and Onu, I. (2021). Urban migration and labor shortages in rural Nigeria: Implications for agricultural productivity. *African Journal of Agricultural Economics*, **12**(3):78-95.
- Adepoju, A., Adetunji, M. and Ojo, S. (2022). Transportation challenges and agricultural productivity in Nigeria. *International Journal of Transportation Studies*, **14**(1):33-50.
- Adesope, O. M. and Nnadi, F. N. (2021). Government policies and the performance of smallholder agriculture in Nigeria. *Journal of Agricultural Policy Research*, **15**(2):45-61.
- Akerele, E. O., Idowu, A. O., Oyebanjo, O., Ologbon, O. A. C. and Oluwasanya, O. P. (2018). Economic Analysis of Cassava Production in Ogun State, Nigeria. *Acta Scientific Agriculture*, **2**(8):43-50.
- Akinagbe, O. M. (2010). Constraints and Strategies towards Improving Cassava Production and Processing in Enugu North Agricultural Zone of Enugu State, Nigeria. *Bangladesh Journal of Agricultural Research*, **35**(3):387-394.
- Akinyele, I. O. (2009). Ensuring Food and Nutrition Security in Rural Nigeria: An Assessment of the Challenges, Information Needs, and Analytical Capacity. IFPRI Discussion Paper. Available at: <https://www.ifpri.org/publication/ensuring-food-and-nutrition-security-rural-nigeria>
- Eke-Okoro, O. N. and Njoku, D. N. (2012). A Review of Cassava Development in Nigeria from 1990-2010. *Journal of Agricultural and Biological Science*, **7**(1):59-65.
- Ezedinma, C., Ugwu, B. and Okoye, B. (2020). Market dynamics of cassava products in Nigeria: Trends, challenges, and opportunities. *Nigerian Agricultural Journal*, **51**(1):21-34.
- Ezeh, C. and Chukwuemeka, N. (2022). Financing agricultural cooperatives: Challenges and prospects in Nigeria. *Journal of Rural Development and Management*, **18**(2):59-77.
- Food and Agricultural Organization (FAO), (2001). The State of World Cassava. Rome, FAO.
- Food and Agricultural Organization (FAO), (2022). Human Nutrition in Tropical Africa. Rome, Italy: FAO.
- Food and Agricultural Organization Statistics (FAOSTAT), (2020). Agricultural Statistics of Nigeria. Rome, Italy: FAO.
- Hagblade, S. and Zulu, B. (2003). Conservation Farming in Zambia. Washington. D.C., International Food Policy Research Institute. EPTD Discussion Paper No. 180.
- Ikuemonisam, E. S., Mafimisebi, T. E., Ajiefun, I. and Adenegan, K. (2020). Review of Cassava Production in Nigeria: Trend and Decomposition Analysis Approach. *Trim Ekonomisi Arastirmalari Dergisi* (TEAD), **6**(2):102-114.
- International Institute of Tropical Agriculture. (2021). Cassava (*Manihot esculenta*). Available: <https://www.iita.org/ewopsnew/cassava>.
- Iyangbe, C. and Orewa, S. (2021). Impact of road infrastructure on the profitability of cassava farming in Nigeria. *Journal of Development and Agricultural Economics*, **13**(6):223-235.
- Nweke, F. and Ugwu, B. (2021). Challenges in cassava processing and value addition in Nigeria. *Journal of Agricultural Technology and Innovation*, **8**(4):92-105.
- Ogungbile, A., Yusuf, K. and Hassan, R. (2021). Farm theft: A neglected constraint in Nigerian agriculture? *African Review of Economics and Finance*, **13**(2):45-63.
- Omotayo, A. M. and Oladele, O. I. (2020). The role of extension services in improving cassava productivity among smallholder farmers in Nigeria. *African Journal of Agricultural Extension*, **5**(2):34-49.
- Omotesho, C. C., Olubunmi, A. H. and Abayomi, T. (2008). Global Food Crises and National Food Security: Strategic Options for Nigeria". Paper presented at the 2008 Annual Conference of the Development Finance Department of Central Bank of Nigeria. Held at Orchid Hotel, Delta State. 15th – 18th, October
- Onwuka, J. and Nwaru, J. (2021). Cost of processing and its effects on cassava farming in Nigeria. *Nigerian Journal of Agribusiness and Rural Development*, **17**(3), 67-85.



- Uchendu, M. K. (2008). Putting Globalization to work for the Sustainable food Security for all By the 2020. *Proceeding of an International Conference Organized by IFPRI, Washing, D.C.*
- Ugururedo, G. B. (2008). Inputting the output of Cassava through women Cooperatives. *Nigeria Journal of Cooperative Studies*, 2(1):24-38. Retrieved from [http://www.fao.org/3/ca2320en/CA2320EN. Pdf](http://www.fao.org/3/ca2320en/CA2320EN.Pdf).
- Ukeje, M. F. (2008). Agricultural Development Issues. It's Sustainability and Food Security in Nigeria. Paper presented at the 2008 Annual Conference of the Development Finance Department of Central Bank of Nigeria, held at Orchid Hotel, Asaba, Delta State. 15th-18th October.