

EXPORT MARKET AWARENESS AND PARTICIPATION POTENTIALS AMONG RURAL CROP FARMERS IN ABEOKUTA, OGUN STATE.****RUKAYAT KIKELOMO ISIKA**

Department of Sociology
Lagos State University, Ojo, Lagos, Nigeria.
+2348038450065, rkisiaka@gmail.com

JUBRIL OLAYIWOLA JAWANDO

Department of Sociology
Lagos State University, Ojo, Lagos, Nigeria.
+2348023432853, Jawando2002@yahoo.com

SHERIFAT OLABISI YUSUFF

Department of Sociology
Lagos State University, Ojo, Lagos, Nigeria.
+234(0)7030386279, soyusuf@yahoo.co.ca

*****Corresponding Author*****ABSTRACT**

Nigeria has been making series of efforts to encourage export and improve standard of living of her most vulnerable people. This study examined the level of awareness in export market and participation potentials among the rural crop farmers in Abeokuta, Ogun State. The study employed a mixed-methods design. Quantitative data were collected from 372 farmers in Ifo block using structured questionnaires, while qualitative insights were gathered through interviews and focus group discussions. Stratified random sampling ensured representativeness. Data analysis combined descriptive statistics with thematic content analysis, enhancing validity and contextual understanding. The findings indicated that 77% of farmers are aware of export, 79% have considered export before while about 66.9% are likely to participate in export. This study concludes that more rural crop farmers are aware of export than those that are ready to participate in export. The study recommends that export development institutions should continue with export sensitisation programmes for rural farmers in order to encourage them to increase their participation in export market while rural crop farmers should take advantage of the opportunities to export their produce in order to improve their income and standard of living.

KEYWORDS: Export awareness, export participation, export potentials, rural farmers, crop farmers.

INTRODUCTION

In Nigeria, before the discovery of oil, rural dwellers with farming as a major occupation contributed significantly to the nation's economy by exporting cash crops like cocoa, groundnut, kola-nut and rubber. For example, agriculture had a high export share of 75% in 1965 which declined to just 3% in 2012. Its contribution to the GDP in 1960 was about 63% which nosedived steadily to 34% in 1988, 33.4% in 2009, 30.9% in 2012 and less than 20% in 2014 (Odetola and Etumnu, 2013). The discovery of crude oil in commercial quantities in Nigeria in 1968 and the subsequent oil boom of the 1970s culminated in its displacement of agriculture as the driver of the nation's economy. Within a decade up to 1981, agricultural output in Nigeria continuously declined leading to the importation of major staples like rice, wheat, sugar and fish to augment local supplies. Since then, Nigeria has been spending a substantial amount of its foreign reserves on importing staple foods. For example, Adesina (2012) averred that Nigeria spent over 1.3 trillion Naira in 2010 alone on importation of wheat, rice, sugar and fish. This is why the Federal Government recently began to emphasize the need for diversification as a means of improving the quality of life of the Nigerian populace.

In Nigeria, the government has implemented different financial and non-financial export support programmes to improve the welfare of producers of exportable goods and earn foreign currency for the country. Examples of non-financial incentives include training, export processing factories, buyback arrangements, foreign market linkage, export expansion grant scheme, establishment of the Nigerian Export-Import (NEXIM) Bank and export credit insurance facility (NEPC, 2023). Similarly, there are institutional frameworks through which export information can reach farmers, which include extension workers under Agricultural Development Programme (ADP) and Nigeria Export Promotion Councils (NEPC) (Afreximbank, 2022).

However, despite efforts by different stakeholders including government and international organisations to reposition smallholder farmers towards production for export, there is little or no improvement for the rural farmers to embrace export-oriented production according to Ignatius and Haapasaari (2018). There are social and environmental challenges confronting rural farmers towards adopting export-oriented production. Government motivation focus on the technical aspect of production, such as seedlings, land cultivation, fertilizers and pesticide issues with little consideration on adequate awareness creation on the opportunities and benefits of export to rural and smallholder farmers in Nigeria. This gap in the body of knowledge motivated this study to determine the level of export market awareness and participation potentials among rural farmers in Abeokuta, Ogun State.

OBJECTIVES OF THE STUDY

The specific objectives of this study are to examine:

1. The level of export market awareness among rural farmers in Abeokuta, Ogun State.
2. The extent of export market participation potentials among rural farmers in Abeokuta, Ogun State.

RESEARCH QUESTIONS

In line with the objectives, the study answers the following questions:

1. What is the level of export market awareness among rural farmers in Abeokuta, Ogun State?
2. To what extent are rural farmers in Abeokuta, Ogun State positioned to participate in export markets?

LITERATURE REVIEW

According to Obidike (2011), rural farmers account for the greater part of the population of any developing country such as Nigeria. Consequently, it is a major responsibility of the governments of developing countries to ensure that there is adequate rural development in their various communities and local governments which would lead to effective and efficient agricultural systems that will not only supply food and animal protein but also foster the utilization of natural resources in a sustainable manner. Achieving this objective requires adequate dissemination of knowledge to rural farmers to enable them improve their processes for greater food production. Zheng and Ma (2023) posited that lack of access to required knowledge and information that can help rural farmers in their farms achieve maximum agricultural productivity contributes in no small way to inadequate food security in different nations. This incapacitates the ability of the nation to have excess food supply which will necessitate exporting to generate more income for national development.

The recent decline in oil revenues has forced the government of Nigeria to seek economic diversification by pursuing agricultural development as a veritable means to address dependence on food imports costing nearly 11 billion dollars annually (Yakubu and Akanegbu, 2015). It has also engaged in a campaign to redirect focus from oil to agriculture, manufacturing and solid minerals development. In this regard, the government has rolled out five agricultural development initiatives, namely; Anchor Borrowers Program (ABP), Presidential Fertilizer Initiative (PFI), Youth Lab, Presidential Economic Diversification Initiative (PEDI) and Food Security Council.

The ABP, for example, was created by the Central Bank of Nigeria and works in partnership with state governments and several private sector groups to provide farm inputs in kind and cash to smallholder farmers to boost the production of agricultural commodities. At harvest, the farmers supply their produce to the agro-processors (anchor), which pay the cash equivalent to the farmers' account. According to government reports, under the ABP initiative, a cumulative amount of over 150 million dollars has been disbursed to more than 250,000 small farmers who cultivated almost 300,000 hectares of farmland for rice, wheat, maize, cotton, soybeans, and cassava (Busari and Wahab, 2003; Evbuomwan and Okoye, 2017).

A review by Nwanosike, Kalu, Ogbuabor, Uzoechina and Ebenyi (2016) indicated that the agricultural sector contributed over 60% of the GDP in the 1960s and despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 70% of Nigeria's exports and 95% of its food needs. However, events took a downturn following the oil boom of the 70s, which turned the country's attention to 'oil dollars', leading to the total neglect of this important sector. Since then, the country has been witnessing several economic problems as the nation that once exported foods could no longer even feed its citizens. Despite the country's abundant workforce, land and water resources, food and animal production continues to be on the decline which prompts the government to import food to meet the nation's food requirement.

According to the 2006 National Population Census, Nigeria has about 71 million hectares of arable land. In spite of all these, it still cannot feed its populace, not to talk of exporting for more income generation. Successive government, as well as other stakeholders in the sector, have, therefore, continued to develop different intervention programmes to revive the ailing economy by addressing the Nation's Agricultural challenges. Among some of the development initiatives that had been implemented to bring the nation back to its good old days included; the Farm Settlement Schemes; and the National Accelerated Food Production Programme (NAFPP), launched in 1972, the Operation Feed the Nation, launched in 1976, the River Basin and Rural Development Authorities, established in 1976, the Green Revolution Programme, inaugurated in 1980, the Back to the land initiative, the Directorate for Food, Road and Rural Infrastructure (DFRRI), as well as the World Bank-funded Agricultural Development Projects (ADP), among others. All these programmes sought to improve food production, which will subsequently translate to food security and a better economy (Agber, Iortima and Imbur, 2013; Sylvanus, Edet and Ityav, 2023).

Also, in September 2000, Nigeria was one of the 193 nations of the world that endorsed the Millennium Development Declaration aimed at encouraging development by improving social and economic conditions in the world's poorest countries. The summit developed a roadmap that has as its target eight goals that were to be achieved by the year 2015. The Goal One of the Millennium Development Goals (MDGs) was to

‘Eradicate extreme poverty and hunger’ by the year 2015. And to this end, Nigerian governments, at all levels on their part, have continued to embark on many programmes and introduce many policies to increase food production via agricultural development. There have also been various Presidential Initiatives on Agriculture and Rural Access as well as programmes such as Mobility Programme, Buyer of Last Resort Programme, Fertilizer Stabilization Programme, National Special Programme on Food Security, Community-Based Agricultural Development Programme and National Fadama Development Programme, and the Transformation Agenda (Okon, and Ukwaiyi, 2012; Ajiye, 2014; Nnoli, Enilolobo, Hassan and Bello, 2023). Arokoyo (2012) stated that many development efforts in Nigeria, including agriculture, in which substantial human and financial resources have been invested, have failed to achieve the expected desired results primarily because the targeted beneficiaries of the efforts have not been involved in the planning and design of the programme.

While many African countries are yet to realize the potential of horticultural and vegetable exports, Kenya has positioned itself as a major supplier of both globally. In 2018, for example, Kenya exported \$1.53 billion worth of flowers and vegetables to the European Union (EU). Meanwhile, in Nigeria, the export market for flowers, fruits and vegetables remains vastly unexploited. Only one known flower in Nigeria is cultivated for exports; the hibiscus. When dried, hibiscus flowers are used in the production of tea, popularly known as ‘Zobo’ in Nigeria and for other medicinal uses. The fruit and vegetables market has not fared any better. According to official statistics, in Nigeria, in 2013, exported goods were worth \$46.32 billion, of which a paltry \$3.83 billion was contributed by vegetables and fruits to Europe and America (Oseghale, 2019).

In 2016, vegetable exports took an upward swing when Anambra State Governor, Willy Obiano, announced that the state was the first in Nigeria to export fluted pumpkin leaves or ‘Ugu’ valued at \$5 million to Europe. According to the Agricultural Fresh Produce Growers and Exporters Association of Nigeria (AFPGEAN), Nigeria loses between 55 per cent and 72 per cent of its cultivated fresh produce (fruits and vegetables) before it can be consumed, much less exported (Oseghale, 2019). According to Market Insider (2015), most of the non-oil Nigerian exports are usually destined for Europe. The country exports huge quantities of oranges and various varieties of pepper, waterleaf and telfairia.

According to NAQS (2020), importing countries of the world need phytosanitary certificates to accompany Nigeria's plant and vegetable export. Request forms for certifications are obtainable at the Nigeria Agricultural Quarantine Service (NAQS). A phytosanitary certificate contains statements to the effect that the accredited officers of the NAQS have carried out quarantine inspection and that the consignment of plants/plant products is pest-free at the time of examination. It also states whether or not any form of treatment has been carried out. Plant materials exported from Nigeria

that are not covered by a phytosanitary certificate stand the risk of being rejected or destroyed on arrival at the importing country, usually at the exporter's expense. Application forms for plant export permits are available on demand at designated NAQS offices in Ibadan, Ikeja, Kano, Port-Harcourt, Maiduguri and Abuja.

NAQS is a Federal Ministry of Agriculture and Rural Development regulatory agency. NAQS ensures that our agricultural exports meet international standards such as the International Plant Protection Convention (IPPC). It is part of the NAQS's job to visit farms and tell farmers how to farm the vegetables, what chemicals to apply when to harvest based on flight schedule, how to harvest them, how to put them in pack houses and how to treat them. NAQS also encourage exporters to get a cold van to transport them from the farm to the airport so that the shelf life and the rate of wilting are reduced to the barest minimum (NAQS, 2020).

Market participation is a major pathway for rural people to assuring better income and improve their food security. Improving access to markets is paramount in increasing smallholders' market participation and the extent of their participation, *ceteris paribus* (Kyaw, Ahn and Lee, 2018). Avoiding factors that limit market access by smallholder producers will enhance market participation.

A researcher (Olwande and Mathenge, 2012) examined the factors influencing the market participation of crop producers, and their impacts on income and poverty among the poor and marginalized groups in Kenya. The objective of the study was to examine the most significant constraints to market participation for the different social groups. The study used a Heckman two-stage model and modelled participation in input and output markets. The study found that female-headed households had higher bean market participation than male-headed households. Land size, membership to a group, and distance to a tarmac road had positive and significant effects on bean market participation, while price had a negative but significant effect. The study found that per capita land size had a positive and significant effect, while crop price had a negative and significant effect on the extent of beans market participation (see also Abdulai, Bahadur and Fraser, 2023).

Another researcher (Mussema and Dawit, 2012) evaluated the market chain of red pepper at the HSD and Silti zone of Ethiopia. The objective of the study was to identify factors affecting the volume of pepper supply. The study used a Heckman two-stage model to assess the factors that affect red pepper producers' output market participation. The study found that the quantity of red pepper produced and the extension service had a positive and significant influence on market participation, while the yield of cereals had a negative and significant effect on market participation. The study also found that livestock numbers and non-farm income negatively and significantly influence the amount of red pepper supplied to the market. It was concluded that policies improving pepper production capacity by identifying new

technologies and creating stable demand for surplus production would enhance farmers' decisions on marketable surplus. As a result, policy should be designed on integrated farming systems to minimize income risk and improve the farmers' livelihood. An attempt was made to analyse red pepper market participation and the extent of participation. Similar conclusion can be found in (Shangshon, Wongsamun, Polthanee and Suriya, 2023).

METHODOLOGY

This study adopted a mixed-methods research design, combining both quantitative and qualitative approaches to provide a comprehensive understanding of rural farmers' export market awareness and participation potentials in Abeokuta, Ogun State. The quantitative aspect enabled the collection of measurable data through structured questionnaires, while the qualitative aspect, via in-depth interviews (IDIs) with extension officers and focus group discussions (FGDs) with farmers, allowed for deeper insights. This triangulation enhances the validity of findings and ensures a robust analysis of the research questions. The study was conducted in the Ifo block of the Abeokuta agricultural zone, Ogun State. The Abeokuta zone consists of six blocks: Ilewo, Ifo, Ilugun, Wasimi, Olorunda, and Opeji. Ifo block was purposively selected due to its strategic proximity to Lagos State, a major market hub and export gateway for agricultural produce via air and sea routes. The Ifo block comprises an estimated 22,800 rural farming households (OGADEP, 2017), distributed across eight agricultural circles: Akinsinde, Egbeda, Ijoko, Coker, Ajibode, Iju-Atan, Iyesi, and Irodu.

A stratified random sampling technique was employed to ensure representativeness across the eight agricultural circles. Based on the formula provided by Singh and Masuku (2014) and further supported by Rahman (2023), a statistically adequate sample size of 372 rural farmers was determined and randomly selected for participation in the study. Primary data were collected using a structured questionnaire, complemented by in-depth interviews (IDIs) and focus group discussions (FGDs). The instruments were subjected to content validity checks by experts in agricultural economics and rural development. A pilot study involving 20 respondents from a non-sampled block was conducted to assess reliability. The questionnaire yielded a Cronbach's alpha coefficient of 0.82, indicating acceptable internal consistency and reliability. Quantitative data were analysed using descriptive statistics (frequencies and percentages) while qualitative data from IDIs and FGDs were analysed thematically using content analysis techniques, which allowed for the identification of recurring patterns and emergent themes. The decision on research questions was guided by the proportions that fall into yes and at least likely (typically more than 50%) and the repetition and consistency of themes in the qualitative data. This integrated approach ensured that both measurable trends and contextual factors were captured to adequately address the study objectives.

RESULTS

Research Question 1: What is the level of export market awareness among rural farmers in Abeokuta, Ogun State?

Table 1: Extent of export market awareness among rural farmers in Abeokuta, Ogun State

Measures	Options	Frequency (Percentage)
Know about export	Yes	287 (77.2%)
	No	85 (22.8%)

For the level of awareness about export, 77.2% of respondents were aware of export while the remaining 22.8% claimed they were not aware of fresh crop export. This indicated that majority of the farmers are aware of export market opportunities for agricultural produce.

The existence of adequate awareness about export was confirmed by comments of farmers and the extension officers during in-depth interviews and focus group discussions. For example, in one of the focus group discussions, it was aired thus:

I see export as transporting or selling agricultural produce from one country to another. The introduction of export to the farmers will be seen as a good advantage for farmers' growth.

FGD/Farmer/Female/Yoruba/37years/2022

A male extension officer stated during the interview that:

To me, export is moving agricultural produce abroad or selling crops to another country. Exportation also depends on the kinds of crops being produced. It will have a good and a great positive impact on our farmers if they can adopt export, it can make improve their standard of living.

IDI/Extension officer/ Male/ Yoruba/51 years/2022

Thus, the conclusion on research question 1 is that there is high level of export market awareness among rural farmers in Abeokuta, Ogun State

Research Question 2: To what extent are rural farmers in Abeokuta, Ogun State positioned to participate in export markets?

Table 2 export participation potentials among rural farmers in Abeokuta, Ogun State

Considering export	Yes	294 (79.0%)
	No	78 (21.0%)
Likelihood of participating in export	Very likely	112 (30.1%)
	Likely	137 (36.8%)
	Undecided	104 (28.0%)
	Unlikely	14 (3.8%)
	Very unlikely	5 (1.3%)
Enough for export	Yes	245 (65.9%)
	No	127 (34.1%)

A focus group discussion comment on the subject matter goes thus:

Export involves selling produce outside Nigeria/ Transportation of agricultural goods to other countries, or sales of produce outside the border of the country. This will be a good advantage to the farmers if the farmers get it right.

FGD/Farmer/Male/Yoruba/42years/2022

Another extension agent stated the advantage of export as follows:

Though export is the selling of agricultural produce from one country to another country. Selling agricultural produce overseas or selling agricultural produce abroad brings foreign exchange to the country. This will help the farmers to receive foreign currency, and this will also help to boost their income.

IDI/Extension officer/ Female/ Igbo/48 years/2022

But a respondent had this to say thus:

In my own opinion, export is the selling of agricultural produce outside one's country. That is selling agricultural produce like crops and the rest to another country. This is a good idea if our farmers will welcome it because there are some farmers that we need to explain and explain to before they can understand and be convinced; they are contented with their old ways of doing things. Suppose it can be well explained to some of our farmers, to be able to convince them of a new method of selling that can bring more money. I think it will be a good and welcome development for the farmers.

IDI/Extension officer/ Male/ Yoruba/50 years/2022

Another FGD discussant similarly emphasized this thus:

Welcoming export will be a great positive impact on the farmers, bring about an active and high standard of living, generate more farmers, improve farmers' life quality, encourage more youth to participate in farming and bring about youth empowerment in agriculture through export.

FGD/Farmer/Male/IGBO/53years/2022

An extension officer has this to say about export:

To me, export is taking goods outside Nigeria ... to another country. The farmers also know about export, but they don't know how to do it. Usually, it is the business people that know how to export that buy from farmers for export. I know of one Alhaji that export garri, precisely ijebu garri. The man usually goes to the farm to buy the garri from the farmers. He will do the finishing and everything by himself. He will now export. He has a brother abroad that he sends to that use to help him. If I want to do it today, I have people like that that I can contact on the process. But for the farmers, I don't think that in my area any farmer is exporting. Those farmers, if they see somebody that can guide them; they will be eager to do export. They need information and somebody they trust. We have many farmers with some level of formal education; they have attended several trainings on agricultural businesses. They are ready to do anything that would increase their profit. But the only problem farmers are having is a lack of information. For example, if a farmer is told that a special type of okra or any other vegetable is needed by white people and the seed is given to farmers with explanations on how to nurture it, farmers would be interested. Even farmers that are only involved in cassava before can do such business. Even the farmer will go and look for appropriate land that suits the crop if necessary. They will be very, very happy that they were remembered because they have done this for years without anybody seeing them. Now that people are looking at their side. I think it is a good thing.

IDI/Extension Officer/Female/Yoruba/46years/2022

DISCUSSION OF FINDINGS

The study found a strong level of export awareness among rural farmers, with 77.2% of respondents recognizing export potential and articulating its benefits clearly during FGDs and interviews. This aligns with broader trends in Sub-Saharan Africa, where access to market information and farmer training enhance commercial outlooks

significantly. For instance, Otekunrin et al. (2022) reported that improved market knowledge positively influenced commercialization and reduced food insecurity among smallholders in Southwestern Nigeria. Likewise, Onomu (2023) showed that better awareness of market dynamics increased participation and use of technologies like tractors, underscoring the critical role of information distribution in mobilizing farmers toward new market opportunities (Onomu, 2023).

Regarding export participation potential, a substantial proportion of farmers showed readiness and intent as 79% had considered exporting, 66.9% were likely to participate and 65.9% felt they had enough production. Notably, farmers' openness was often tempered by gaps in procedural knowledge. Extension agents noted that farmers possess the interest and production capacity but require guidance on navigating the export process. This is consistent with Otekunrin's (2022) assertion that while awareness is necessary, it is not sufficient as farmers also need structural support such as trust-based linkages with exporters and training on quality standards to fully integrate into export value chains.

CONCLUSION

This study examined the level of export market awareness and participation potentials among rural farmers in Abeokuta, Ogun State. The findings revealed a relatively high level of awareness among the majority of respondents regarding export opportunities for agricultural produce. This suggests that previous efforts by government and institutional actors to create awareness have had a measurable impact. These efforts are in the form of support on input, implementation and extensions service from the Ogun State Agricultural Development Programme (OGADEP), Value Chain Development Programme (VCDP), and FADAMA programme.

Furthermore, a significant proportion of rural farmers indicated their willingness to participate in export activities and believed they had sufficient production capacity to support such ventures. However, despite this positive disposition, the study also highlighted a critical gap: while interest and potential exist, actual participation remains low due to limited knowledge of export procedures and weak linkages to export value chains.

The study concludes that improving access to reliable export information, targeted training, and institutional support is essential to transition rural farmers from awareness to active participation in export markets. Addressing this gap will not only increase farmers' income and welfare but also contribute to Nigeria's broader economic diversification agenda.

RECOMMENDATIONS

Based on the finding from this study, the study recommends that Ogun State government should do the following:

1. Empower extension agents and NEPC to offer export-focused training that includes regulatory processes, quality standards, packaging and certification to rural farmers.
2. Develop local hubs equipped with processing, packaging and storage facilities to enable value-addition and ensure consistency.
3. Support access to agricultural technologies and foster direct connections to exporters, reducing dependence on intermediaries and increasing farmer earnings.

REFERENCES

- Abdulai, A., Bahadur, K., & Fraser, E. (2023). What factors influence the likelihood of rural farmer participation in digital agricultural services? Experience from smallholder digitalization in Northern Ghana. *Outlook on Agriculture*, 52(1), 57–66. <https://doi.org/10.1177/00307270221146697>
- Adesina, A. (2012). *Transforming agriculture to grow Nigeria's economy* [Convocation lecture]. Obafemi Awolowo University, Ile-Ife.
- Afreximbank. (2022). Afreximbank, NEPC, and NEXIM Bank sign \$1bn agreement to boost Nigeria's non-oil exports. <https://www.afreximbank.com>
- Agber, T., Iortima, P. I., & Imbur, E. N. (2013). Lessons from implementation of Nigeria's past national agricultural programs for the transformation agenda. *American Journal of Research Communication*, 1(10), 238–253.
- Ajiye, S. (2014). Achievements of Millennium Development Goals in Nigeria: A critical examination. *International Affairs and Global Strategy*, 25, 24–36.
- Arokoyo, T. (2012). *The concept of participation in agricultural development*. Department of Mass Communication, Zaria.
- Busari, A. O., & Wahab, M. K. (2003). Determinants of cashew nuts exports supply in Nigeria (1980–2020). *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, 23(1), 81–87.
- Evbuomwan, G. O., & Okoye, L. U. (2017, July). Evaluating the prospects of the Anchor Borrowers' Programme for small scale farmers in Nigeria. Paper presented at the 21st International Farm Management Congress, Edinburgh, Scotland, UK.
- Ignatius, S. H. M., & Haapasaari, P. E. (2018). Justification theory for the analysis of the socio-cultural value of fish and fisheries: The case of Baltic salmon. *Marine Policy*, 88, 167–173. <https://doi.org/10.1016/j.marpol.2017.11.007>
- Kyaw, N. N., Ahn, S., & Lee, S. H. (2018). Analysis of the factors influencing market participation among smallholder rice farmers in Magway region, central dry zone of Myanmar. *Sustainability*, 10(12), 4441. <https://doi.org/10.3390/su10124441>
- Market Insider. (2015). Nigeria emerging as fruit export giant. <http://www.intracen.org/blog/Nigeria-emerging-as-fruit-export-giant/>

Mussema, M., & Dawit, A. (2012). Red pepper marketing in Siltie and Alaba in SNNPRS of Ethiopia: Factors affecting households' marketed pepper. *International Research Journal of Agricultural Science and Soil Science*, 2(6), 261–266.

NAQS. (2020). *Plant and plant products import-export requirements*. <https://www.naqs.gov.ng/import-export/plant.html>

NEPC. (2023). *Export development programmes and interventions*. Nigerian Export Promotion Council. <https://nepc.gov.ng>

Nnoli, T. I., Enilolobo, S. O., Hassan, C. O., & Bello, A. B. (2023). Inflation, exchange rate and agricultural export in Nigeria. *Greener Journal of Agricultural Sciences*, 13(2), 91–98. <https://doi.org/10.5281/zenodo.8114742>

Nwanosike, D. U., Kalu, U. I., Ogbuabor, J. E., Uzoechina, B., & Ebenyi, G. O. (2016). Economic development dynamics in Nigeria: Evidence from 1914–2014. *Saudi Journal of Business and Management Studies*, 1(4), 154–161.

Obidike, N. (2011). Rural farmers' problems accessing agricultural information: A case study of Nsuka local government area of Enugu State, Nigeria. *Library Philosophy and Practice (e- journal)*. <http://unllib.unl.edu/LPP/>

Odetola, T., & Etumnu, C. (2013). Contribution of agriculture to economic growth in Nigeria. Paper presented at the *18th Annual Conference of the African Econometric Society*, Accra, Ghana. http://www.aaawe.org/wp-content/uploads/2015/01/Tolulope_paper_mod.pdf

OGADEP. (2017). *Extension component report: January–December 2016*. Ogun State Agricultural Development Programme (OGADEP), 30th REFILS Workshop, Institute of Agricultural Research and Training, Ibadan, Oyo State.

Okon, D. E., & Ukwaiyi, J. K. (2012). Challenges and prospects of the Millennium Development Goals (MDGs) in Nigeria. *Global Journal of Social Sciences*, 11(2), 119–132.

Olwande, O., & Mathenge, M. (2012, August). Market participation among poor rural households in Kenya. Paper presented at the *International Association of Agricultural Economists (IAAE) Triennial Conference*, Foz do Iguaçu, Brazil.

Onomu, A. R. (2023). Smallholder's market participation, characteristics, tractor use implication and determinants in Nigeria. *Journal of Developing Areas*, 57(4), 1–27. <https://doi.org/10.1353/jda.2023.a908644>

Oseghale, C. (2019). Exploiting Nigeria's unknown flower, fruit and vegetable export market. <https://shipsandports.com.ng/exploiting-nigerias-unknown-flower-fruit-vegetable-export-market/>

Otekunrin, O. A., Momoh, S., & Ayinde, I. A. (2022). Investigating food insecurity, health and environment related factors, and agricultural commercialization in Southwestern Nigeria: Evidence from smallholder farming households. *Environmental Science and Pollution Research*, 29, 51469–51488. <https://doi.org/10.1007/s11356-022-19544-w>

Rahman, M. M. (2023). Sample size determination for survey research and non-probability sampling techniques: A review and set of recommendations. *Journal of Entrepreneurship, Business and Economics*, 11(1), 42–62.

Shangshon, B., Wongsamun, C., Polthanee, A., & Suriya, P. (2023). Impact of agricultural extension services on cereal production among rural farmers in Bhutan. *Journal of Agricultural Extension*, 27, 13–26.

Singh, A. S., & Masuku, M. B. (2014). Sampling techniques and determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 2(11), 1–22.

Sylvanus, U. F., Edet, I. V., & Ityav, D. L. (2023). Foreign exchange fluctuations on the performance of agricultural export in Nigeria economy. *Asian Journal of Economics and Empirical Research*, 10(1), 10–18.

Yakubu, M., & Akanegbu, B. (2015). Neglecting agriculture and its consequences to the Nigerian economy: An analytical synthesis. *European Journal of Research in Social Sciences*, 3(3), 18–27.

Zheng, H., & Ma, W. (2023). Smartphone-based information acquisition and wheat farm performance: Insights from a doubly robust IPWRA estimator. *Electronic Commerce Research*, 23(2), 633–658. <https://doi.org/10.1007/s10660-022-09572-2>