

**Anchor Borrowers' Scheme Initiative and Rice Production Among Farmers in  
Northern Agricultural Zone of Cross River State, Nigeria**

**Fidela Enoidem Udoh, PhD**

**&**

**John Betiang Adie**

Department of Agriculture Education

Faculty of Vocational Education, Library and Information Science

**Abstract**

*The study was conducted to ascertain the influence of Anchor Borrowers' Scheme Initiative and Rice Production among Farmers in Northern Agricultural Zone of Cross River State. Ex-post Facto research design was adopted for the study. Two research questions and two null hypotheses were formulated to guide the study. The population of the study was 3574 registered rice farmers and 30 RIFAN Coordinators in Northern Agricultural Zone of Cross River State. Meyer Model (1940) was used to determine the sample size of 381 respondents who participated in the study. Anchor Borrowers Scheme Initiative and Rice Production Questionnaire (ABSIRPQ) was used for data collection. The instrument was face validated by three experts. To test for the reliability of the instrument, the researcher conducted a trial testing using 30 registered farmers who were not part of the main study but equivalent in all aspects to the registered farmers in the main study. Cronbach Alpha method was used for data analysis and the result yielded .97 co-efficient. This result confirmed that the instrument was reliable for use in obtaining the information for the study. The data were analyzed using Mean and Standard Deviation to answer the research questions while Independent t-test was used in testing all the hypotheses at .05 level of significance. The result of the study revealed that there was a very strong influence of financial inclusion initiative and poverty alleviation initiative of Anchor Borrowers Scheme on rice production among farmers in Northern Agricultural zone of Cross River State. It was concluded that Anchor Borrowers Scheme of the Central bank of Nigeria greatly influences rice production in Northern Agricultural Zone of Cross River State, Nigeria. Based on the findings, it was recommended among others that Ministry of Agriculture should organize workshops, seminars and symposium for rice farmers on the importance of keying into the anchor borrowers' initiative programme to expand their rice production as well as improve on their yearly income.*

**Key Words:** Anchor Borrowers' Scheme Initiative, finance, Poverty, Production, Rice,

**Introduction**

Rice, *Oryza sativa* is an edible starchy cereal grain that belongs to the grass family *poaceae*. The seed of rice plant is of high economic value as it is consumed by man and livestock alike. It is a food crop and a major staple food around the globe. As one of the major staple foods in Nigeria, it is consumed across all geopolitical zones, religious and socioeconomic classes. Rice is an important foodstuff, which is consumed almost daily by a large number of people in Nigeria. Rice production involves a systematic procedure of

cultivation, growing, harvesting, processing and storage. Cultivation of rice plants has been a veritable source of food and income to farmers as well as an avenue for employment generation for the teeming youths. Food and Agriculture Organization Statistical database (FOASTAT, 2018) submitted that, rice has received widespread attention from international, regional and national bodies and it is the second highest worldwide produced grain crop after maize. Rice is said to be the most important grain with regards to human nutrition and calories intake. Significant proportion of the Nigerian population depends on rice for their dietary needs. Usman (2011) similarly, pointed out that, rice provides more than one fifth of the calories consumed worldwide by human beings, though it is relatively lower in protein compared to other cereals, rice contains a better balance of amino acids which is an essential source vitamin needed by man.

In Nigeria, rice is grown in all the States of the federation with variations in production and production system from State to State. The various production systems in the country include but not limited to rain-fed upland, rain-fed lowland, irrigated lowland, deep water floating and mangrove swamp (Orefi, 2011). Cadoni and Angelucci (2013) submitted that, Nigeria is the largest consumer of rice in West Africa. Historically, rice had been substantially produced in Nigeria to meet local consumption before the oil boom of the 1970s brought in huge foreign exchange, which diverted the disincentive to increase domestic production of rice (Erenstein, Frederic, Titilola, Akpokadje & Ogundele, 2013). The situation led to acute shortage of rice and increased demand for the commodity in the country. To address the demand-supply gap for rice in Nigeria, in recent past, government evolved different policies and programmes such as the Africa Rice Initiative 2012; Nigerian National Rice Development Strategy (NRDS), 2009-2018; Growth Enhancement Support Scheme (GESS) for rice value chain under presidential transformation Agenda 2011 (Osuoha, 2014). The inconsistent policies reflected the predicament of securing cheap rice for consumers and fair price for the producer (Ogundele, 2014).

In spite of all the lofty programmes of government with diverse nomenclatures, local rice production has not kept up with domestic consumption demands in the country. Nigeria meets its demand deficit through importation of rice from other countries. Except strong measures are put in place to improve rice production in Nigeria, the increased consumption of rice will continue to place demand above supply of the food crop. Most of the farmers who ventured into the production of rice are rural dwellers faced with subsistence techniques of farming, utilizing crude farming implements and lack of funds to meet global best farming practices of agricultural mechanization and other emerging technologies.

In order to assist farmers to solve some of these challenges and improve access and availability of inputs such as seeds, fertilizers, herbicides and to ensure food security and bridge the demand deficit gap of low production capacity of rice in the country, Central Bank of Nigeria (CBN) (2016) pointed out that, the CBN in line with its developmental function established the Anchor Borrowers' Programme (ABP) with different scheme initiatives including rice production to cater for the welfare of Nigerians and boost the economy of the nation. The Programme which was launched by President Muhammadu Buhari on November

17, 2015 aimed at creating a linkage between the Central Bank Nigeria, anchor companies and farmers involved in the production and processing of required key agricultural commodities such as rice, wheat, sugarcane, cotton, fish and poultry products.

The broad objective of the Anchor programme was to create economic linkage between farmers and reputable large-scale processors with a view to increasing agricultural output and significantly improve capacity utilization of processors such as rice millers and micro finance banks. Other objectives include: increase banks' financing to the agricultural sector; reduce agricultural commodity importation and conserve external reserves; increase capacity utilization of agricultural firms; create new generation of farmers and employment; deepen the cashless policy and financial inclusion; reduce the level of poverty among farmers and assist rural farmers to grow from subsistence to commercial production levels. The non-availability of credit is the most limiting factor of all the constraints. Lack of credit and/or inadequate credit is generally recognized as one of the major constraints not only in expanding production but also, in modernizing agriculture in Nigeria.

Financial inclusion is defined as the availability and equality of opportunities to access financial services. It refers to a process appropriate, affordable and timely services, which include; banking, loan, equity and insurance products. Financial inclusion efforts typically target those who are unbanked and under banked, and direct sustainable financial services to them. It is understood to go beyond merely opening a bank account therefore; having more inclusive financial system in rice production has been linked to stronger and more sustainable economic growth and development in the nation's economy (Effiom, 2019).

The adequacy and timeliness gap indices revealed that the different formal lending agencies were unable to meet the credit needs of these small scale farmers hence, credit was inadequately and untimely provided to small scale farmers because they depend on rain-fed agriculture (Kalu, Omeje and Mba, 2018). Effiom (2019) opined that ease of access to financial products and services means financial products must be within easy reach of all segments of the population and should be easy for anyone to get it. Financing also needs to be tailored to demand based on small farmers' needs, which includes not only farm investments but also living costs. Financing at the right time will also make for greater efficiency, improved product quality, and increased income. Further, microfinance, also known as microcredit or microloans, is a financial service in which lenders offer loans, savings and insurance to smallholder business and entrepreneurs who do not have access to traditional sources of capital, like banks or investors (Ullah and Khan, 2017; Weber and Musshoff, 2017). Microloans are smaller than traditional bank loans. The goal of micro-financing is to provide individuals with money to invest in themselves or their smallholder business. In most cases the micro-lenders prefer that the borrowers work together to repay their loans, which improves accountability for timely repayments and better credit.

Successful agricultural activities depend on the proper availability of financial resources and their utilization (Akhtar et al., 2016). Smallholder farmers tend to utilize agricultural finance in proper ways; therefore, agricultural finance should be made available activities that can improve agricultural output. Agricultural finance is an integral part of

equitable development within a framework of macroeconomic stability. The availability of adequate and affordable agricultural finance is central to the implementation of this strategy. One difficulty is that limited access exists to short-term and long-term financing needed for agricultural purposes (Akhtar et al., 2016). However, the current administration may be willing to endure the long-term borrowing costs that defaulting creates rather than risk the short-term survival costs of removing cheap food policies for urban consumers. Anchor Borrowers Programme is geared towards provision of funds to farmers to help them meet their farm objectives. Promoting more dynamic agriculture development will require clear programme and policy frameworks rather than a narrow focus on smallholder farmers, and alternative modes and scale of production requiring new institutional and policy frameworks (Collier & Dercon, 2014). Members of the international community and directors of national agricultural research systems recognize the importance of supporting smallholders' farmers to reduce poverty and promote the food security status of some of the most vulnerable groups in the world (John & Fielding, 2014). Several researchers have found that growth in smallholder agriculture can have strong impacts on poverty reduction (Luan, Bauer, & Köhl, 2016). In the view of Samberg et al., (2016), successful policies and programmes aimed at poverty alleviation, food security, and protection of biodiversity and natural resources depend on the inclusion and participation of smallholder farmers. Therefore, the success of anchor borrowers programme could be x-rayed by the financial inclusion of rice farmers. The aim of financial inclusion initiative of anchor borrowers' scheme in rice production is to remove all barriers stem by poor financial infrastructure and lack of nearby financial institutions as well as high cost to opening accounts and documentation requirements.

Poverty alleviation is central in the objectives of the Rice Anchor Borrowers' Scheme (RABS). In relation to people, the basic concept of poverty refers to a serious inadequacy of economic condition, a situation of individual, group or regional lack or deprivation of what are considered the necessities for acceptable living standards or not having access to a conducive environment, facilities, and opportunities for decent living standards. Poverty alleviation involves the approach used to improve the living conditions of people who are already poor; an aid in scientific areas is essential in providing better lives.

The poverty reducing potential of value addition of rice processing is not only in generating rural income and employment but also by improvement in processing that reduce traditional food preparation times (Obasi & Enyia, 2016). Farmers that participate in this aspect of value addition activities are likely to be better off due to the additional income from their involvement in these activities. The additional income reduces poverty levels through its positive contribution to welfare indicator. Oladimeji, Abdulsalam & Abdullahi, (2015) asserted that, additional income is an important determinant of poverty alleviation. Hence, increase in off farm activities will lead to extra household income which could reduce the poverty level of the farmers. Furthermore, value addition also creates employment at low levels of investment that make effective use of local resources and also creates vertical linkage with farmers that supply inputs (John, Kuwornu, and Moses, 2014). This draws the attention of various stakeholders in promoting agribusiness especially the agro-processing sector (John *et al.*, 2014)

maintains that growth in income of households is achievable through agro-processing. Policies and programmes of government such as Anchor Borrower Scheme focuses on ameliorating the impact of poverty through commitment to farmers' physical, social, economic, cultural and political wellbeing. Farm input is one of the requirements for successful rice farming in Cross River State.

Although the rice anchor Programme has laudable goals and objective and have been in existence over five years now in Nigeria and in Cross River State in particular, the gap between domestic production of rice and domestic demand for rice is still wide making the country to depend on the international markets to fill the demand-supply gap at a colossal amount of foreign exchange owing to the low productivity in the local production of rice.

#### **Statement of the Problem**

In spite of lofty programmes of successive administrations in Nigeria to enhanced local rice production, none has been able to meet up with domestic consumption demands in the country as the county meets it demand deficit through importation of rice from other countries. Except strong measures are put in place to improve rice production in Nigeria, the increased consumption of rice will continue to place demand above supply of the food crop. It has been observed that current food crisis is caused by a web of interconnected forces involving agriculture, energy, climate change, trade and new market demands from emerging markets which has grave implications for economic growth and development. Food insecurity in the county has been attributed to low productivity in the agricultural sector, necessitating huge food imports. Rice being a major staple food is of vital concern to agricultural policy decision.

Rice production in Cross River State is confronted with many challenges including outdated land tenure system that constrain access to land, low level of irrigation development practice in rice cultivation, high cost of farm inputs, poor access to credit, insufficient fertilizer procurement and application, poor processing and storage facilities among other challenges. The stronger force of demand for rice relative to supply is evidenced in frequent rise in the price of rice and therefore has great implication for the food security status and economic development of the economy

It was thought that adopting rice importation would bridge the demand deficit gap of low production capacity in rice shortage problem. However, it has become obvious that such policy rather than bring solutions, has fueled inflation, discouraged local production and created poverty among many farm household and helped to caused food insecurity. This therefore necessitated alternative policy actions such as anchor borrowers' scheme. Much effort has been geared towards increasing the availability of rice to address the country's negative balance of payments on food through foreign exchange on its importation. Yet rice is still smuggled by merchants to the country. Were even the military has joined forces with custom to enforce the ban on its importation. It is against this background that the researcher seeks to investigate Anchor Borrowers' Scheme Initiative and rice production among farmers in Northern Agricultural Zone of Cross River State, Nigeria. Specifically, the study sought to determine:



1. the influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.
2. the influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.

### **Research Questions**

The following research questions were posed to guide the study:

1. What is the level of influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State?
2. What is the level of influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State?

### **Research Hypotheses**

The following null hypotheses were formulated and tested at .05 level of significance:

1. There is no significant influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural zone of Cross River State.
2. There is no significant influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural zone of Cross River State.

### **Methodology**

This study employed ex-post facto design to obtain data from the sample to generalize the entire population. According to Ndiyo (2010) ex post facto research is a research that is undertaken after the event have taken place and the data are already in existence. Therefore, it is a systematic empirical study in which the researcher does not in any way controls or manipulates independent variables because the situation for study already exists or has already taken place. The design is appropriate for the study since data was obtained from registered rice farmers with structured questionnaire on anchor borrowers' scheme initiative in rice production.

The study was conducted in Northern Agricultural Zone of Cross River State. The area currently comprises five local government areas including Ogoja, Yala, Obudu, Bekwarra and Obanliku under which are several tribes and languages. There is no significant difference in their origin, arts, culture, religion and worldview. The area is chosen for this study on the basis that the area is located within the rain forest vegetation zone of Nigeria which provides ideal climatic and edaphic conditions for the cultivation of a variety of arable crops including rice. More so, rice is one of the crops grown by many rural farmers in the area and it is a major staple food too which many households depend on for their dietary needs.

The target population for the study is 3,574 Registered Rice Farmers and 30 RIFAN Coordinators as certified by Cross River State Ministry of Agriculture (Cross River State Ministry of Agriculture, 2020). A sample of 381 (comprising of 351 registered rice farmers being 9.82% of the farmer's population and 30 RIFAN coordinators) was used for the study.

The choice of 351 registered rice farmers for the study was determined based on the principle set forth by Meryer (1940) model for the determination of sample size, which states that for population between 3,501 and 4,000, the sample size of 351 is most suitable. The entire RIFAN coordinators were used for the study on the basis that the population of the coordinators was manageable. A simple random sampling technique (lucky dip) was used to select the sample that was used for the study. On the basis of Meryer Model of sample size determination which indicated that 9.82% of the population is suitable for the study, 9.82% of rice farmers was randomly selected from each of the five Local Government Areas that constitute the Northern Agricultural Zone of Cross River State.

Data for the study was sourced for using a researcher-made instrument titled: Anchor Borrowers' Scheme Initiative and Rice Production Questionnaire (ABSIRPQ). The questionnaire instrument was scrutinized and face-validated by three research experts, from Department of Agricultural Education, University of Uyo. The experts' comment on the suitability of language, coverage and adequacy of items was used to draft the final copy of the instrument for data collection. In order to establish reliability estimate, the Anchor Borrower Scheme Initiative and Rice Production Questionnaires was administered to 30 registered farmers who were not part of the main study but equivalent in all aspects to the registered farmers in the main study. The scores obtained from the respondents were analyzed to determine the internal consistency of the instrument. Cronbach Alpha coefficient was used for the single scores obtained from the farmers. The result yielded 0.97 coefficient. The questionnaire was administered to the respondents by the researcher with the help of three research assistants who were briefed on the modalities for administering and retrieving the instrument. Three hundred and eighty-one (381) copies of the questionnaire was administered to 351 registered rice farmers and 30 RIFAN Coordinators upon introduction and obtaining of permission from the chairman of Rice Farmers' Association of Nigeria, Cross River State chapter to conduct the study with the farmers. The questionnaires were retrieved on the spot. Research questions were answered using Mean and Standard Deviation. Independent t-test statistical tool was used to test the null hypotheses at .05 level of significance. In answering the research questions, mean difference between 0.1 to 0.5 was remarked 'low influence' while mean difference between 0.6 to 1 was remarked strong influence.

## **Results**

**Research Question 1:** What is the influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State?

**Table 1:** Mean and Standard Deviation of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State

Variables	N	Mean	SD	Mean Difference	Remark
Financial Inclusion Initiative	381	3.06	.476	0.75	High Influence
Rice Production	381	3.71	.445		

The results on Table 1 show the mean and standard deviation points of the respondents on financial inclusion initiative of Anchor Borrowers Scheme is on rice production among farmers in Northern Agricultural zone of Cross River state. The result shows that the mean score for financial inclusion initiative is 3.06 while the mean score for rice production is 3.71. the mean difference is 0.75 which implies that there is a high influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.

**Research Question 2:** What is the influence of influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State?

**Table 2:** Mean and Standard Deviation of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.

Variables	N	Mean	SD	Mean Difference	Remark
Poverty Alleviation Initiative	381	3.20	.306	0.51	High Influence
Rice Production	381	3.71	.445		

The results on Table 2 show the mean and standard deviation points of the respondents on poverty alleviation initiative of Anchor Borrowers Scheme is on rice production among farmers in Northern Agricultural zone of Cross River state. The result shows that the mean score for financial inclusion initiative is 3.20 while the mean score for rice production is 3.71. the mean difference is 0.51 which implies that there is a high influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.



**Null Hypothesis 1:** There is no significant difference in the mean ratings of rice farmers and RIFAN coordinators on the influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production in Northern Agricultural Zone of Cross River State. The result is presented in Table 3.

**Table 3:** Independent t-test Analysis showing difference in the response of rice farmers and RIFAN on the influence of financial inclusion initiative of Anchor Borrowers' Scheme on Rice Production in Northern Agricultural Zone of CRS

<b>n = 381</b>								
<b>Variables</b>	<b>Group</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>	<b>df</b>	<b>t-cal</b>	<b>Sig</b>	<b>Decision P&lt;.05</b>
Financial Inclusion Initiative	Rice Farmers	351	21.45	2.27	379	.74	.675	NS
	RIFAN Coordinators	30	21.77	2.16				

*NS = Not Significant at .05 alpha level*

Table 3 indicates that the calculated t-value is .74 and the p-value on the SPSS sheet is .675. Comparison of the sig-value on the SPSS sheet to the significance value of .05 shows that the sig-value on the SPSS sheet is greater than .05 thus, the null hypothesis was retained. This implies that there is no significant difference in the mean ratings of rice farmers and RIFAN coordinators on the influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.

**Null Hypothesis 2:** There is no significant difference in the mean ratings of rice farmers and RIFAN coordinators on the influence of on poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State. The result is presented in Table 4.

**Table 4:** Independent t-test Analysis showing difference in the response of rice farmers and RIFAN on the influence of Poverty Alleviation Initiative of Anchor Borrowers' Scheme and Rice Production in Northern Agricultural Zone of CRS

<b>n= 381</b>								
<b>Variables</b>	<b>Group</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>	<b>df</b>	<b>t-cal</b>	<b>Sig</b>	<b>Decision P&lt;.05</b>
Poverty Alleviation Initiative	Rice Farmers	351	24.71	2.46	379	.84	.402	NS
	RIFAN Coordinators	30	25.1.	2.22				

*NS = Not Significant at .05 alpha level*

Table 4 indicates that the calculated t-value is .84 and the p-value on the SPSS sheet is .402. Comparison of the sig-value on the SPSS sheet to the significance value of .05 shows that the sig-value on the SPSS sheet is greater than .05 thus, the null hypothesis was retained. This implies that there is no significant difference in the mean ratings of rice farmers and RIFAN coordinators on the influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural Zone of Cross River State.

### **Discussion of Findings**

#### **Financial Inclusion Initiative of Anchor Borrowers' Scheme and Rice Production among Rice Farmers.**

Findings revealed that there is a very strong influence of financial inclusion initiative of Anchor Borrowers Scheme on rice production among farmers in Northern Agricultural zone of Cross River State. More so, there is no significant difference in the mean rating of rice farmers and RIFAN on the influence of financial inclusion initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural zone of Cross River State. This implies that when farmers have access to useful and affordable financial products and services through the anchors borrowers' initiative, their rice productivity would be high. This increase in the productivity is because of the availability of financial resources and utilization during the rice-planting season. This finding is in line with Ullah and Khan (2017) who posited that financing also needs to be tailored to demand based on farmers' needs, which includes not only farm investments but also living costs. Financing at the right time will also make for greater efficiency, improved product quality, and increased income. Akhar et al (2016) added that successful agricultural activities depend on the proper availability of financial resources and their utilisation. In line with the result, Effiom (2019) identified savings as a key drive for financial inclusion. He discussed that rice farmers need to put up the habit of saving to help access finances for improved production. He asserted that there exists no doubt that financial inclusion could lift millions out of poverty.

#### **Poverty Alleviation Initiative of Anchor Borrowers' Scheme and Rice Production among Farmers.**

Finding revealed that there is a very strong influence of poverty alleviation initiative of Anchor Borrowers Scheme on rice production among farmers in Northern Agricultural zone of Cross River State. More so, there is no significant difference in the mean rating of rice farmers and RIFAN on the influence of poverty alleviation initiative of Anchor Borrowers' Scheme on rice production among farmers in Northern Agricultural zone of Cross River State. The implication of this result is that poverty remains a major setback in the productivity of agricultural goods and services. Poverty alleviation programmes has a potential of generating additional income and employment through food stability with time. Farmers' involvement in the anchor borrowers' programme would reduce poverty through its additional income to invest into rice cultivation. This is because poverty is aligned with the inability of an individual to access income for relevant purposes. This result of the finding is supported by Obadan (2017)

who posited that irrespective of how poverty is defined, the poor have been described as those who could not obtain adequate income, find stable job, own property or maintain healthy condition. Therefore, it is on this note that the Central Bank of Nigeria (2016) noted that the activities of the anchor borrowers' initiative made it possible for more people to be assisted to increase their productivity.

### **Conclusion**

Based on the findings of the study, it was concluded that Anchor Borrowers Scheme of the Central bank of Nigeria greatly influence rice production in Northern Agricultural Zone of Cross River State, Nigeria. It was equally concluded that financial inclusion initiative, poverty alleviation initiative, farm input initiative, and collateral initiative and capacity utilization have significant influence on rice production. Therefore, rice farmers should take advantage of the government Anchor Borrowers' Scheme Initiative to improve on rice production in the area.

### **Recommendations**

The following recommendations were made based on the results of the finding:

- (i) State Government through the Ministry of Agriculture should organize workshops, seminars and symposium for rice farmers on the importance of keying into the anchor borrowers' initiative programme of the government to expand their rice production as well as improve on their yearly income. The farmers should be guided on the various means to access the finances accrued to them for rice production.
- (ii) Poverty has been seen as a setback to effective rice production in the study area, hence state government should provide modalities such as farm tools and monetary resources to encourage maximum participations in rice farming. With limited amount of interest, a greater number of rice farmers will key into the Anchor borrowers' scheme and in turn reduce the poverty level of the rice farmers.

### **References**

- Akhtar, A., Malik, M. S., & Awan, A. G. (2016). Impact of agricultural finance on production of fruits: Evidence from Pakistan. *Pakistan Journal of Social Sciences (PJSS)*, 36, 693-703. Retrieved from <https://www.bzu.edu.pk/PJSS/Vol36No 22016/PJSS-Vol36-No2-9.pdf>
- Cadoni, P. & Angelucci, F. (2013). Analysis of incentives and disincentives for rice in Nigeria Technical notes series MAFAP, FAO, Rome.
- CBN. (2016). Anchor borrowers' programme guidelines. Development Finance Department, Central Bank of Nigeria, Central Business District, Abuja.
- Collier, P., & Dercon, S. (2014). African agriculture in 50 years: Smallholders in a rapidly changing world? *World Development*, 63, 92-101. doi:10.1016/j.worlddev.2013.10.001

- Effiom, G. (2019). Lending-as-a-Service: a panacea to financial inclusion. Retrieved from <https://www.linkedin.com/pulse/lending-as-a-service-panacea-financial-inclusion-grace-effiom> on 5th May, 2021.
- Erenstein, O., Frederic, L., Titilola, G., Akpokadje, G. & Ogundele, O. (2013). The Nigerian rice economy in a competitive world: Constraint, Opportunities and Strategic Choices: Rice production system in Nigeria: A survey of WARDA, Abidjan, Cote d'ivoire.
- Food and Agriculture Organization Statistics (FAOSTAT) (2018). World wheat, corn and rice.
- John, A., & Fielding, M. (2014). Rice production constraints and 'new' challenges for South Asian smallholders: Insights into *de facto* research priorities. *Agriculture & Food Security*, 3(18), 1-16. doi:10.1186/2048-7010-3-18
- John, K. M, Kuwornu, M. B. & Moses, D. (2014). Farm households' livelihood diversification into agro-processing and non-agro processing activities: empirical evidence from *Ghana Information Management and Business Review*, 6(4): 191-199.
- Kalu, U. I., Nnaemeka, A., Omeje, A. N., & Mba, A. J. (2018). Financial inclusion in the agricultural sector in Nigeria: An index of penetration. *International Journal of Economics and Financial Issues*, 8(5): 35-44
- Luan, D. X., Bauer, S., & Kühl, R. (2016). Income impacts of credit on accessed households in rural Vietnam: Do various credit sources perform differently? *AGRIS on-Line Papers in Economics and Informatics*, 8(1), 57-67. doi:10.7160/aol.2016.080106
- Obadan, M. O. (2017). Analytical framework for poverty reduction: Issues of economic growth versus other strategies *proceedings of the Nigerian Economic Society's Annual Conference*, 1-18.
- Obasi, P. C. & Enyia, C. O. (2016). Analysis of value addition and livelihood diversification among fadama users in Imo State, Nigeria. *Federal University Technology Owerri Journal* 2(2), 236 – 251.
- Oladimeji, Y. U., Abdulsalam, Z. & Abdullahi, A. N. (2015). Determinants of participation of rural farm households in non-farm activities in Kwara State, Nigeria: a paradigm of poverty alleviation. *Ethiopian Journal of Environmental Studies and Management*, 8(6): 635 – 649.
- Orefi, A. (2011). Fertilizer usage and technical efficiency of rice farms under tropical conditions: A Data Envelopment Analysis (DEA). *Journal of Agricultural Science*, 2(2):83-87.
- Osuoha, S. A. (2014). Analysis of government initiatives on rice production in Nigeria. *Journal of Advances in Science and Technology*, 2(6): 89-93.

- Samberg, L. H., Gerber, J. S., Ramankutty, N., Herrero, M., & West, P. C. (2016). Subnational distribution of average farm size and smallholder contributions to global food production. *Environmental Research Letters*, 11, 124010. doi:10.1088/1748-9326/11/12/124010
- Ullah, I., & Khan, M. (2017). Microfinance as a tool for developing resilience in vulnerable communities. *Journal of Enterprising Communities: People and Places in the Global Economy*, 11, 237-257. doi:10.1108/JEC-06-2015-0033
- Usman, A. (2011). Analysis of technical efficiency and its determinants among small scale rice farmers in Niger State. Unpublished MSc. Dissertation, Department of Agricultural Economic and Rural Sociology, Ahmadu Bello University, Zaria, Nigeria.
- Weber, R., & Musshoff, O. (2017). Can flexible agricultural microfinance loans limit the repayment risk of low diversified farmers? *Agricultural Economics*, 48, 537-548. doi:10.1111/agec.12355