



## **SOCIO-ECONOMIC CHARACTERISTICS AND CONSTRAINTS OF SMALL-SCALE RICE FARMERS PARTICIPATION IN ANCHOR BORROWER PROGRAMME (ABP) IN JIGAWA STATE, NIGERIA**

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### **ABSTRACT**

The study examined the socio-economic characteristics and constraints of small-scale rice farmer's participation in the Anchor Borrower Programme (ABP) in Jigawa State, Nigeria. The specific objectives of this study were to, describe the socio-economics characteristics of the respondents and identify the constraints faced by the smallscale rice farmers in the study area. Multi-stage sampling techniques were employed to select 258 smallholder rice farmers. Data were collected using questionnaire and analyzed using descriptive statistics. The result shows that majority of the respondents are in active age, 20-30years (28.3%); in term of marital status, most of respondents 55.8% were married, 69.8% of the respondents were male and most of the respondents attended one form of formal education. The finding also revealed that about half 53.0% of the respondents were members of the cooperative society. The major constraints to participation of smallholder rice farmers in ABP as reported were, inadequate inputs, farmers level of education, land tenure system, and poor funding which were ranked 1<sup>st</sup>, 2<sup>nd</sup>, 2<sup>nd</sup> and 4<sup>th</sup> respectively. The programme has enhanced both income and outputs of the beneficiaries. It is recommended that; Federal Government should be consolidated on the gain of ABP in the state by increasing the fund for the programme in the state and make sure more smallscale rice farmers to benefit from the programme. Government and other stakeholders should encourage timely provision of inputs to ABP participants, other agricultural and financial institutions in the state should streamline their procedure for securing loans in order to make it easy to farmers.

**Keywords:** Participation, Anchor Borrower, Programme, Constraints, Rice and Farmers

### **INTRODUCTION**

Rice (*Oryzasativa* L) is an important cash crop and a major source of income for smallholder farmers, who consume 20% of their total production (Okpiaifo *et al.* 2020). It is one of the widely produced and consumed food crops in Nigeria (FAO, 2018). It can be described as a family staple, gracing all the dining tables despite the social strata. The increasing domestic demand for rice in Nigeria has been attributed to consumer preferences, increasing incomes, rising urban population, among others. It is one of the global foremost food crops contributes about 42% of the globe's required source of calorie intake. The demand for rice in Nigeria is increasing annually and expected to reach almost 36 million tons by the year 2050, due to massive population growth as the country was forecasted to be the third most populated country in the same year, against the current population of 198 million (Adeyemo,



2018). Besides, the increase of harvested area from 2011 to 2017 yet, the rice production increment is yet to meet the demand (FAO, 2018).

The banning of rice importation in to the country imposed by the government to provide credit facilities to rice farmers. The imperative of rice has made food security studies since the beginning of the 21st century to explore the possibilities of boosting and sustainability of rice production (Kabir, *et al.* 2019).

Nigeria established many financial institutions in the 1970s to provide credit to farmers. However, only 4% of total lending to the entire sectors was allocated to the agricultural sector by commercial banks. Nevertheless, many rice farmers have been reported complaining about the inability to access credit from Anchor Borrowers Programme in the country (Gabriel, 2018). The program thrust of the ABP is provision of farm inputs in kind and cash (for farm labour) to small holder farmers to boost production of these commodities, stabilize inputs supply to agro processors and address the country's negative balance of payments on food. At harvest, the Smallholder Farmer (SHF) supplies his/her produce to the Agro-processor (Anchor) who pays the cash equivalent to the farmer's account. The Programme evolved from the consultations with stakeholders comprising Federal Ministry of Agriculture & Rural Development, State Governors, millers of agricultural produce, and smallholder farmers to boost agricultural production and non-oil exports in the face of unpredictable crude oil prices and its resultant effect on the revenue profile of Nigeria. (Bank of Agriculture (BOA), 2016). In order to boost agricultural production and non-oil exports in the face of unpredictable crude oil prices and its resultant effect on the revenue profile of Nigeria, the Central Bank of Nigeria (CBN) in line with its developmental function, established the "Anchor Borrowers' Programme" (ABP).

In order to overcome the challenges posed by food insecurity so many agricultural programs were introduced with the sole aim of boosting food production, and stemming the tide of food insecurity. According to Evbuomwan, and Okoye, (2017), in an effort to solve the challenges facing the agricultural sector and help Nigeria overcome the problems of food insecurity through importation by over dependence on oil revenue, led to the launch of the Anchor Borrowers' Programme (ABP). The Anchor Borrower Programme (ABP) was launched by President Muhammad Buhari (GCFR) on November 17, 2015. The intention of the programme was to create a linkage between larger processing outfits (anchor companies) involved in the processing of agricultural produce, and small holder farmers, who specialize in the production of the required key agricultural commodities (CBN, 2016). According to Okelola (2019) as in February 2018, about 80% of the farmers in Nigeria who received credit under the programme were rice producers. The programme is presently in operation in 14 States namely Kano, Kaduna, Katsina, Sokoto, Jigawa, Kebbi, Zamfara, Adamawa, Niger, Plateau, Lagos, Ogun, Cross-Rivers and Ebonyi. The programme is still ongoing with positive impact on the participants that key into it (Sheik, *et, al* 2020). This study specifically attempts to identify the rice farmers participating in the Anchor Borrower Programme challenges and their socioeconomic characteristics in the study area

## **MATERIALS AND METHODS**

### **The Study Area**

Jigawa State lies between Latitudes 11°N and 13°N and Longitudes 8°E and 10°35'E and covers a total land area of about 22,410 square kilometres fig2. The state is bordered on the east by Bauchi and Yobe states, on the west by Kano and the north by Katsina and Yobe



states and by the Republic of Niger. Jigawa State was created from Kano State on Tuesday, August 27, 1991 (Garba, 2017).

The state has a population of 4,361,002 as at 2006 Census (Nigeria Population Commission, 2006) with a projected population of 8,292,956.5 in 2022 using 3% annual growth rate. With GDP of \$2,988 Million, and per capita income of at \$673 (National Bureau of Statistics, 2020). The State has a reasonable number of natural resources, and vast arable land, which is still yet to be explored. Farming is the major occupation accounting for about 80% employment in the State. Jigawa has a low literacy level of about 53.6% and is among the poorest states in Nigeria (NBS, 2014). Jigawa state has a land area of approximately 22,210 km<sup>2</sup> or about 2.2 million hectares. Most part of the state lies within the Sudan savannah vegetation zone. On some parts of the southern boundaries, some traces of Guinea Savannah do exist. The rainfall is higher in the southern part of the state. Jigawa has an average of about 700mm annual rainfall, (JARDA, 2004). The rainy season is between May to October in the south and June to September in the north.

The state is considered to be agrarian as more than 90 percent of the working adults engage in agriculture as a means of their livelihood (JARDA, 2004). Popular rain fed food crops are millet, sorghum, beans and rice. Crop production during the rainy season is mainly for subsistence with farmers averagely cultivating about 2.5 hectares (Ado, 2012). Major cash crops include: rice, cowpea, groundnut, Bambara nuts, sesame, pepper, bitter melon, and water melon (JARDA, 2004). Livestock such as cattle, sheep, goats, poultry and donkeys are very common in the state. Rice production has been an integral part of agricultural production in Jigawa state. Almost every farming household in the state engages in the production of the crop (JARDA, 2004). This partly informed the decision of the federal government through the central bank of Nigeria and the Jigawa State government to encourage the production of rice as one of the key cash crops in the state.

#### **Sampling Procedure and Sample Size**

Multi-stage sampling procedure was employed to select smallholder rice farmers in the state for this study. The multi-stage sampling technique is most appropriate when a researcher intends to reduce the size of the study area while maintaining fair representation. The technique, also, reduces time and cost of surveying samples from very large population (Onemolease, 2009). The technique essentially involves reducing the size of the study population to a convenient size but passing through several stages to ensure representation.

The first stage involved a purposive sampling of all the beneficiaries and some non-beneficiaries across the four agricultural zones of the State within the period of 2018 to 2020. Then four LGAs in each of the agricultural zone of the State were selected owing to their participation in the ABP for the purpose of this study. On this basis, respondents were drawn from the four agricultural zones of Jigawa State (Birnin kudu, Kazaure, Hadejia and Gumel). The sampled LGAs were; Dutse, Birninkudu, Gwaram and Buji (BirninKudu zone), Gwiwa, Gumel, Babura and Suletankarkar (Gumel zone), Hadeija, Auyo, Malanmadori and Kafin Hausa (Hadejia zone) and Taura, Roni, Kazuare and Yankwasi (Kazaure zone). The second stage involved purposive selection of the respondents based on their experiences and year of registration across the diverse agricultural zones of the State within the period of 2018 to 2020. The summary of the selection plan for the respondents based on their experience in Table 1.



**Table 14:** Selection of the respondents based on their registration year with ABP

S/n	Year	Registered Beneficiaries	Percentage of selected beneficiaries
1	2018	500	50
2	2019	180	30
3	2020	1,745	20
<b>Total</b>		<b>2,425</b>	<b>100</b>

Source: JARDA, 2022

The third stage involved the compilation of all the beneficiaries of the ABP from each of the selected LGAs from the State. Based on the statistics available at the state's NIRSAL offices, various Off-takers in the state and the Jigawa State's Agricultural Development Programmes office (JARDA), simple random sampling technique were used to select a sample size of ABP beneficiaries from a pool of 2,425 beneficiaries of the selected LGAs. Random sampling technique were employed for the selection, to ensure that the sample was the true representation of the smallholder rice farmers in the study area. Random sampling technique involved selection of individual from a given population such that each individual has an equal chance of being selected (Olowu, 2004).

The process of sample size selection involved the use of Yamane's and Bowley's proportion allocation formulae (Bowley, 1926) at 5% margin of error and 95% confidence interval to establish the sample proportion from each of the LGAs selected for the study. Yamane's formula for determining sample size is expressed as:

$$n = \frac{N}{1 + N(e^2)} \quad \dots (1)$$

Where:

n= Sample Size

N= Population of the study

e= Margin of error

The summary of the selection plan for sample size is presented in Table 2.



**Table 2: Sample Size Selection Matrix**

S/N	State	Zone	LGA	Sampling Frame	Sample Size
	Jigawa		Dutse	30	13
		B/kudu	B/kudu	30	13
			Buji	15	7
			Gwaram	20	9
			Gumel	18	8
		Gumel	Babura	15	7
			Taura	12	6
			S/Tankrkar	20	9
			Hadejia	25	11
		Hadejia	Auyo	12	6
			M/madori	20	9
			K/Hausa	18	8
			Roni	16	7
		Kazaure	Kazaure	20	9
			Yankwashi	15	7
	<b>Total</b>			<b>286</b>	<b>129</b>
	<b>Total</b>	<b>Respondents</b>			<b>258</b>

Sources: Survey data 2022

### Method of Data Collection

Data was collected using structured questionnaire, consisting of both open and closed-ended questions, in line with the objectives of the study. Data were collected on the respondents' socio-economic characteristics, sources of information both on rice production and on ABP, challenges faced in rice production and also in the operation of the ABP's scheme. To ensure effective delivery one extension staff of JARDA in each selected local government areas making (15) personels were engaged for two weeks. It is important to note that the field officers used were proficient in the language of the clients.

### Method of Data Analysis

Data collected were analysed using descriptive statistics. The descriptive statistics including frequency counts, means, and percentages.

## RESULTS AND DISCUSSION

### Socio-economic Characteristics of Smallholder Rice Farmers participating in Anchor Borrower Farmers Programme

The results in Table 3 revealed that 28.3%, of the smallscale rice farmers are between the ages of 20 to 30 years, 38.4% of the farmers falls within the age category of 31 to 40 years, followed by those with age ranging between 41 to 50 years and lastly 7.4% have ages between 51 to 60 years. The average years of the farmers was 25.2 years. The study shows that majority of the smallholder rice farmers participating in anchor borrower programme were youth in their active and productive years, hence they incentivize to increase their farming activities. This disagreed with Sanusi, (2017), Who reported that in research titled "The Effect of Anchor Borrower Programme on Poverty Reduction of Smallholder Rice farmers in Lagos and Ogun States that; about 28% of the respondents are between the age 51-60 years while 26.67% of the respondents were between ages 61-70 years, 25% are between the ages 41 -50 years, 16.67% are between the age 31 -30 years. Table 3: revealed that majority (69.8%) of the farmers were





male the remaining 30.2% were female. Farming in this part of the country is dominated by men, even though this tradition has started to fade. This corroborate with the report of Sanusi, (2017) that, majority (63.3%) of the ABP in Lagos and Ogun States were male and 36.7% were female; this shows that most of the smallholder farmers were males. This result also agreed with Muhammad (2020), that, most of the rice farmers (80.56%) were male, while only 15.44% of the respondents were female. Table 3 further indicated that the most (55.8%) of the farmers were married, 20.9% were single, the least are the divorces who are only 0.4% of the farmers. This is in line with (Magaji 2022), shows that 94% of the respondents are married. This as a result of married people is regarded as responsible for overseeing the family affairs in the study area.

**Table 3:** Socioeconomic characteristics of the respondents in the study area

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>
<b>Age (Years)</b>			
20 - 30	73	28.3	<b>25.2</b>
31 - 40	99	38.4	
41 - 50	67	26.0	
51 - 60	19	7.4	
<b>Sex</b>			
Female	78	30.2	
Male	180	69.8	
<b>Marital status</b>			
Divorced	1	0.4	
Married	37	13.3	
Married	155	55.8	
Single	1	0.4	
Single	58	20.9	
Widow	6	2.2	

**Source:** Field Survey, 2022

### **Household Size, Educational Level, Farming Experience and Membership of Association of the Respondents.**

The results in Table 4 shows that, respondents with a household size of 1-7 people constitutes 57.8%, followed by those with 8-13 people who are 26.4%, followed by those with 14-20 people with 11.2%, the least are those with 28-35 people in their household. Household size is essentially the number of people for whom you are financially responsible, living under the state roof as house, eating from the same pot. Specifically, household size is the household head plus the number of people that were claim as dependents on the farmers for food shelter and clothing but most be eating from the same pot, visitors that cannot last more than six months are not include, married children that in their husband house are not included, children that were employed elsewhere that are not currently eating the household are not included. The result, further revealed that 18.6% had primary school education, 35.7% had secondary school education, about 36% attended up to tertiary education level, the least are those with postgraduate education who are about 1.2% only Even though there about 8.5% have no formal education. Generally, education are an ordered set of categories, intended to group educational programme in relation to gradations of learning experiences and the knowledge, skills and



competencies which each programme is designed to impart levels. Similarly, Sanusi, (2017) who reported that about 7% of the respondents had no formal education, 30% of the respondents had primary school education, 38.3 % of the respondents had secondary school education and 25% of the respondents had their education up to Tertiary education. This implies that larger proportion of the respondents were literate.

Also, Table 4 disclosed that most of the respondents 120 (46.5%) of the farmers have an experience of 11-15years, while 68 (26.4%) have 16-20years, then followed by 26 (11.1%) with above 20years lastly 7(2.7%) farmers with an experiences 1-5years. This, findings have shown that farming experience is related to the age of the farmer. That is, to say, the older a farmer is the more likely the years of farming experience will be.

In addition, result in Table 4 shows that 53.5% are members of a cooperative society, while the remaining 46.5% are not. The finding agrees with Muhammad (2020) who reported that, most (73.0%) registered with the farmers' association. This relates to the policy of the government of providing farm subsidies and other incentives through association than individuals. This implies that most the respondents can access credit from other financial institutions and boost the production.

**Table 4:** Socioeconomic characteristics of the respondents in the study area Cont.'d....

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>
<b>Household Size (persons)</b>			
1 - 7	149	57.8	<b>9</b>
8 - 13	68	26.4	
14 - 20	29	11.2	
28 - 35	12	4.7	
<b>Education Level</b>			
a. no Formal Education	22	8.5	<b>12</b>
b. primary	48	18.6	
c. secondary education	92	35.7	
d. tertiary education	93	36.0	
e. post-graduate	3	1.2	
<b>Farming Experience(years)</b>			
1-5	7	2.7	<b>12</b>
6-10	37	13.3	
11-15	120	46.5	
16-20	68	26.4	
Above 20	26	11.1	
<b>Membership of association</b>			
Yes	138	53.5	
No	120	46.5	

Source: Field Survey, 2022

### **Primary Occupation and Farm Land Ownership of the Respondents**

Primary occupation broadly refers to the kind of work a person does to earn money for survival most of the time. More specifically, the term is used to describe the occupation corresponding with a person's primary job. Occupation is the principal activity in person's life



that one does to earn money, a person's usual or principal work or business, especially as a means of earning a living; Table 5 depicts that majority (84.9%) of the respondents were crop farmers, 9.7% are traders, 2.7%, and 1.6% are livestock farmers. This agrees with the report of Ayinde *et al.* (2018) that majority (58%) of the ABP in Kebbi State were rice farmers.

Table 5 revealed that majority (77.5%) of the farmers acquire their land through inheritance 15.1% purchased it, 1.6% are on lease and 0.8% practice share cropping. The result is in agreement with the report of Ayinde *et al.*, (2018) that rice farmers mostly own their land through inheritance (95.5%) and Communal system of land ownership (4.5%) respectively. This agrees with the study conducted by Moudjahid Akorédé Wabia (2022); which stated that most respondents had access to land through inheritance (85.2%). Other modes of access to land were also found in the study area, such as donation (13.9%), purchase (4%) and land rent (4%).

**Table 5:** Distribution of Respondents According to their Primary occupation and Farm Land ownership

Variable	Frequency	Percentage
<b>Primary occupation</b>		
Artisans	3	1.2
Civil Service	7	2.7
Crop Farming	219	84.9
Livestock Rearing	4	1.6
Trading	25	9.7
<b>Land ownership</b>		
Inherited	200	77.5
Lease	4	1.6
Purchase	39	15.1
Rent	13	5.0
Share cropping	2	0.8

Source: Field Survey, 2022

### **Farm Size of the Respondents**

This is an indication of total area cultivated by farmer on average among all the farmers, the average farm size in the study area for most of the farmers was found to range from 0.5-1.9 ha, (9.8%) followed by those with 2-3.5 ha (18%) and lastly those with smallest proportion are those with farm size less than 0.5 Ha (1.9%). The anchor borrower programme targets majorly the small-scale farmers. This implies that most of the rice farmers participating in the ABP are small scale farmers in the study area

### **Labour Type of the Respondents**

Table 6 shows that most (54.3%) of the farmers uses both family and hired labour, 24.0 uses hired labour, and 24.0 family labour. Labour is total human effort put in the production. Labour can be supplied through hired or family members. The hired is the type of labour that farmers paid money to access, whereas the family labour is the type that farmer do not pay to access it is usually supplied from members of the households. This is in line with Ayode and John, (2014) in research titled deposit money banks' financing of small scale business and Nigerian economic growth in Kaduna State who reported that Majority (59.3%) of farmers in Kaduna State used both family and hired labour for their farm operation.





**Table 6:** Distribution of Respondents according to their Farm size and type of labour used (n=258)

Variable	Frequency	Percentage	mean
<b>Farm size</b>			
Less than 0.5Ha	5	1.9	<b>1.5</b>
0.5 - 1.9ha	206	9.8	
2.0 - 3.5ha	47	18.2	
<b>Labour type</b>			
Family	56	21.7	
Hired	62	24.0	
Both	140	54.3	

Source: Field Survey, 2022

### **Constrains to Rice Farmers Participation inAnchor Borrower Programme in the Study Area**

The result in Table 7 depicts that farmer faced a lot of constrains, however the ones that have more impact on the farmers were Inadequate farm inputs (58.4%), follow by farmers level of education and land tenure systems (57.6%). Poor funding 56.8%, and loan defaulters 47.1%. This finding is supported by Evbuomwan and Okoye (2017), who found a corruption as one of the implementation challenges of ABP in Nigeria. This contributed to inefficient coordination of logistics among the key participants and implementers of the programme, and Anchors leading to late supply/distribution of inputs to farmers. Other challenges under the programme include; low market value (50.6%), low fodder yield (49.0%), administration bottleneck (49.0%), late maturing variety (48.6%), loan defaulters (47.1%), inadequate awareness (42.0%), high level rural-urban migration (42.0%), and government policy (34.2%) respectively.

Badejo and Adekeye (2018) observed some anomalies in the ABP implementation stages, particularly at the loan disbursement stage, citing the National Treasurer of the Rice Farmers Association of Nigeria (RIFAN), reported that many rice farmers were either unable to access loan or were not given the right amount proposed under the programme. Also, some of the 13 participating institutions through whom the CBN disbursed ₦43.92 billion to farmers frustrated the efforts of the farmers in accessing the facility while some were not farmer friendly due to complicated transaction procedures and non-consideration of gestation periods of crop growing. Futhermore (Akinbile 2023) reported that land fragmentation and tenure system was the major constraint ( $\bar{x} = 1.91$ ) encountered by respondents in participating in ABP. This is as a result of the programme specification of the minimum hectareage farmers can have before being involved in the programme.



**Table 7:** Major Constraints Affecting Respondents to ABP Participation in the Study Area.

Constraints	Frequency*	Percentage	Rank
Inadequate farm inputs	150	58.4	1 <sup>st</sup>
Farmers level education	148	57.6	2 <sup>nd</sup>
Land tenure systems	148	57.6	2 <sup>nd</sup>
Poor funding	146	56.8	3 <sup>rd</sup>
Inadequate extension services	139	54.5	4 <sup>th</sup>
High interest rate	133	51.8	5 <sup>th</sup>
Low market price	130	50.6	6 <sup>th</sup>
Administrative bottleneck	126	49.0	7 <sup>th</sup>
Politics/corruption	125	48.6	8 <sup>th</sup>
Loan defaulters	121	47.1	9 <sup>th</sup>

Source: Field Survey, 2022

\* Multiple Responses were recorded

## CONCLUSION AND RECOMMENDATIONS

The study analyzes the effects of participation in anchor borrowers programme (ABP) on livelihood among smallholder rice farmers in Jigawa state, Nigeria. It is therefore concluded that: The finding indicated that ABP has enhanced the income and output of the small holder rice farmers who participated in the programme which led to change in poverty and livelihood status positively in the study area, there was appreciable participation of youth in anchor borrower programme (ABP) in the study area.

Based on the finding the study recommended the following: The federal government should be consolidated on the gain of the ABP in the state by increasing funding for the programme and make sure more rice farmers benefit from the programme given that the programme has enhanced income and outputs of the beneficiaries in the state. The ABP programme should be adequately monitored out, at both administrative and farmers' level to curb any inappropriate activities which will therefore, ensure the effectiveness and efficiency of the programme.

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