RESOURCE USE ACCESSIBILITY ON WOMEN PARTICIPATION IN RICE FARMING AMONG RURAL HOUSEHOLDS IN ANAMBRA STATE, NIGERIA

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ABSTRACT
*This study examined resource use accessibility on women participation in rice farming among rural households in Anambra State, Nigeria with focus on three specific objectives which were to: describe the socioeconomic characteristics of women rice farmers, identify the rice production activities of the women rice farmers and their extent of participation, ascertain women farmers' level of access to resources needed in Anambra State. Hypothetically, the study tested their socioeconomic characteristics influence on their level of resource needs. Data were collected with a structured questionnaire from a cross section of 347 women rice farmers using a multi- stage, purposive, and simple random technique. Data were analyzed with a combination of descriptive statistics, mean threshold from 5 Points Likert Scale, and inferential statistics ofone way analysis of variance (ANOVA). Result of the study showed that average age of the women was 42 years with majority (62.2%) of them married. The average year of formal education was 12 and 15 years of farming experience. Also, the average household size (6), farm size (1.3 ha), monthly income (#33,416.43) and number of extension contact per women rice farmer (1.39) were also revealed. Access to resources needed was found to affect women's participation by 18.0% that was significant at 15.00*** F-statistics value, indicating that the model is fit and normally distributed to affect women's participation in rice production. It is recommended that government should among other things provide necessary resources such as machineries, storage facilities, credit, etc. that could be of importance to women participation in rice farming at the rural household level in Anambra state, Nigeria.*

Keywords: Resource, accessibility, participation, women, household rice production

INTRODUCTION
Rice is a common food staple consumed by over 50% of the world's population (Ricepedia, 2010). In Nigeria, its importance is seen in the fact that it is accepted amongst all cultures (Okeke, Enebong, Uzuegbunam, Ozioko and Kuhnlein, 2008; Onimawo,

2012), and is normally preferably prepared in social functions. Hence, rice production is critical to global food security. In Nigeria, more than 90% of rice is produced by resource poor small scale farmers (Muhammad-Lawal, Memudu, Ayanlere Muhammedu, Olajogun, 2013), and most of the farmers have small farm sizes of about 1 to 5 hectares (Odozi, 2014). This makes rice an important source of employment and income, particularly for the rural people. It was stated, in the mapping of rice production in Nigeria (2017) that rice is a predominant staple crop in Nigeria, produced in over 18 out of 36 states in Nigeria. Most rice-growing areas in Anambra state such as Ayamelum, Anambra West, Anambra East, Awka North, and Orumba North, are characterized by independent smallholder farms, (Chukwukelu, 2017).

The growth recorded in rice production has been facilitated by government policies towards achieving self-sufficiency. Government intervention in rice production has leaned towards providing inputs such as improved seedlings and fertilizer to small holder farmers. Also, some state governments have granted land concessions as an investment incentive to large commercial farmers. Towards improving irrigation, the government is investing in various irrigation projects. Also, through the Central Bank of Nigeria, funding has been made available to rice farmers at affordable rates through the Anchor Borrower's Programme (PWC, PricewaterhouseCoopers Limited 2018). Nkwazema (2016), noted that Nigeria is yet to attain self-sufficiency in rice production. Indeed, continued fluctuation in rice production in the country is an indication of the limited capacity of the Nigeria rice economy to match the domestic demand which can be attributed to the inability of the rice farmers to obtain maximum output from the resources committed to the enterprise (Kolawole, Oladele, Alarima, and Wakatsuki, 2012).

Nigeria's rice yield is one of the lowest globally at 2 tonnes per hectare, relative to 4–7 tonnes per hectare in Asia. More than 80% of Nigeria's rice is produced by small scale farmers, while the remaining 20% is produced by commercial farmers. Besides, most of the processors are small scale with low capacity (less than 300kg/hr) and obsolete mills (Ricepedia, 2013). Thus, Oluwadamilola (2018) opined that the reasons for the demand-supply gap were a low level of income, high cost of inputs, poor access to irrigation facilities, pest and diseases that reduce yield, and high cost of labour. According to Effiong, Ijioma and Okolo (2015), inadequate land, inadequate finance, shortage of farm inputs, low level of infrastructure and climate change were the major problems facing women in rice production in Bende local government Area, Abia State. The participation of women farmers in crop production in Nigeria has been widely described in the literature but, little has been done in the crucial area of their participation in rice production, at household level in Anambra state. It has been noted that systemic gender biases may exist in the form of laws, customs, beliefs and attitudes that confine women mostly to the domestic sphere; and impede their access to credit, production inputs,

employment, education, or medical care (Ogunlela and Mukhtar, 2009). Rahman, Gabriel, and Marcus (2004) stated that women play vital role in food production processing and marketing in Nigeria such as rice production; producing about 60 - 80 percent of total output. Nigerian women have significantly contributed to agricultural production such as food crops production like yam, maize, cassava, rice and others, providing most of the labour and managing many farms daily (Ojo, 2012). In line with the importance of women in agricultural production and food security, it becomes pertinent to inquire about their participation in rice production at the household level in Anambra State.

Specifically, the objectives of the study are to:

(i) describe the socio-economic characteristics of the women rice farmers;

(ii) identify the rice production activities of the women rice farmers and their extent of participation and

(iii) ascertain women farmers' level of access to resources needed in rice production.

Hypotheses of the Study

Ho_1: Access to resources needed by women rice farmers does not significantly affect their extent of participation in rice production at the household level in Anambra State.

METHODOLOGY

Area of the Study

Anambra state is one of the 36 states in Nigeria, located in the South-Eastern part of the country. It comprises 21 Local Government Areas and made up of four agricultural zones. It has an estimated population of 4,182,032, with the male population of 50.9% and female 49.1% (National Population Commission (N.P.C) 2006). The area has a mean temperature of 30^0 C during the hottest period of February to April and 21^0 C during the coldest period of December to January. The state occupies an area of 4,416 square kilometers. About 70% of the total mass is arable land, which is under cultivation while the remaining 30% is residential areas.

Population of the Study

The 9606 women rice farmers across the four agricultural zones; Aguata, Awka, Anambra and Onitsha zones and that registered with the department of Women in Agriculture (WIA) programme in Anambra State Ministry of Agriculture (ANSMA, 2019) constitute the study population.

Sample Size Determination and Sampling Technique

Taro Yamane (1967) sample size determination, has its formular defined as: $n = \frac{N}{1+N(e)^2}$defined in Otabor and Obahiagbon (2016); and obianefo, Nwigwe, Meludu and Anyasie (2020) was applied to calculate the sample size for the study from the list of 9606 women rice farmers supplied by the ANSMA in 2019. Where *n* is sample size, *N* is the population from the Blocks and *e* is the margin of error at 0.05 probability. Utilizing the above formula, the sample size for the study was deduced to be 377.

Furthermore, the study made use of multi-stage approach for sampling technique. In the first stage, three agricultural zones; Aguata, Awka, and Anambra zones were purposively selected from where one block was purposively selected from each zone; Aguata zone (Orumba block l), Awka zone (Awka North Block) and Anambra zone (Ayamelum Block) because the Blocks are well known for rice production. Later on, kumaison (1997) stratum formula $i_{th} = \frac{n_i}{N} * n$ used in Obianefo et al. (2020); and Ekwere and Edem (2014) was used to allocate the sample strata for the study. Where i_{th} is the strata, n_i is the population per Blocks, *N* is the total population and *n* is the sample size for the study.

Table 1: Distribution of women rice farmers according to agricultural zones and blocks

Zone	Blocks	No of registered women	Strata
Aguata	Orumba Block I	277	16
Awka	Awka North	1682	87
Anambra	Ayamelum	4581	244
Total		**6540**	**347**

Source: Anambra State Ministry of Agriculture

In the second stage: five circles, Anaku, Omor, Ifite-Ogwari, Igbakwu, Omasi were randomly selected from Ayamelum Block where fifty, fifty, forty-eight, fifty, and forty-six women rice farmers were randomly selected respectively making up a total of two hundred and fouty-four based on strata representation. Four circles well-known for rice production were purposively selected from Awka North Block; Achalla, Oba-Ofemili, Ugbenu and Ugbene where twenty, twenty-seven, twenty, and twenty women rice farmers were randomly selected respectively (total of eighty-seven)according to the strata represented in table 3.1 above. Lastly, sixteen women rice farmers were randomly selected from three circles; Ufuma, Ajali, and Ndiokolo of Orumba Block 1, five, six, and five women rice farmers respectively. The sample size became 347 women rice farmers.

Method of Data Collection
The data were sourced primarily. Primary data were achieved basically from the use of a structured questionnaire and interview with the women rice farmers in the study area.

Measurement of Variables
Independent Variable
Socioeconomic Characteristics: Age (years), Farming experience (years), Years of school attendant (years), Educational qualification (ordinal: No formal education = 0, primary = 1, secondary = 2, and tertiary = 3), Household size (No), and Marital status (nominal: single = 1, married = 2, widow(er) = 3, separated/divorced = 4), farm size (ha), number of extension visit last cycle (No), monthly income (₦), and membership of a cooperative (dummy; yes = 1, and no = 0)

Accessibility of Resources Needed in Rice Production by Women Farmers amongst Rural Households:
The accessibility was captured on 5-point Likert scale. (Strongly accessible, Accessible, Somewhat accessible, Not accessible, Strongly not accessible).

Dependent variable:
Participation: the level of women participation was captured on frequency, percentage (%), and ranking **Data Analysis**
The study utilized a combination of analytical tools of both descriptive, mean threshold from 5-point Likert scale, and inferential statistics of analysis of variance (ANOVA). Objective one, and two were achieved with descriptive statistics which include frequency, percentage and mean. Objective three was achieved from mean score of 5-points Likert scale. The null hypothesis was tested with one-way ANOVA.
Mean threshold from 5-point Likert scale for objective three was defined as: $\chi = \frac{5+4+3+2+1}{5} = 3.0$,Where:1 = strongly accessible;2 = accessible;3 = somewhat accessible; 4 = not accessible; 5 = strongly not accessible

RESULTS AND DISCUSSIONS
Socioeconomic Characteristics of the Women Rice Farmers
The women's socioeconomic characteristics are presented in Table 2 and discussed.

Age of Women Rice Producers
Table 2 shows that the majority (62.8%) of the women rice producers are within the age bracket of 30 - 59 years, while the remaining women fell into ≤ 20 years (23.9%) and 60 years and above (13.3%). The study equally found their average age as 42.48. This implies that the women are relatively young and in their active farm age. These finding is in agreement with Ayanwal and Amusan (2014) on gender analysis of rice production

efficiency in Osun State. The study also aligns with Kagbu, Omokore, and Akpoko (2016) on the adoption of recommended rice production practice among women farmers in Nassarawa State, Nigeria.

Marital Status of the Women

The study revealed that majority (62.2%) of the women were married, while the remaining 37.8% fell within otherwise categories. This shows that married women dominated household participation. The study was also in agreement with Kagbu*et al* (2016) in factors influencing adoption of recommended rice production practice among women farmers in Nassarawa State, Nigeria.

Level of education

Interestingly, the average years spent in formal learning was 11.85. Also, the study revealed that 50.1% of the women attended secondary school, while 37.2% attended tertiary education and 12.7% attended primary school, respectively. The implication is that the women are fairly educated in the study area. At this level of education, understanding basic adoption principles will be relatively easy. Education is posited to have a positive effect on participation since it enables an individual to make independent choice and to act on the basis of the decision, as well as increase the tendency to co-operate with other people and participate in group activities. This finding aligned with Enete and Igbokwe (2009).

Farming Experience

Table 2 shows that 37.2% of the women had 1 – 10 years and 11 – 20 years farming experience, 25.3% of them had 20 years and above experience. Again, the average years of farming experience was found as 14.69. This is in line with the earlier study of Omiunu (2014) in investigating the challenges faced by women rice farmers in Nigeria and Edeoghon, Iyilade, and Nwachukwu (2019) on the assessment of gender participation in Abakaliki, Nigeria.

Household size (People)

The study shows that the majority (62.8%) of the women had a household size between 6 – 10 people, while the remaining 37.2% had a household size between 1 – 5 people. Reportedly, the average household size was 5.89. This average household size is large enough to supply cheap family labour. Household size is expected to positively influence farmers' participation. This is in tune with Adimado (2001) on Willingness to Pay for Research Findings: A Case Study of Pineapple Farmers in Ghana. **Farm size (Ha)**

Majority (62.2%) of the women's farm size ranged from 0.01 – 1.50 ha, 25.1% ranged from 1.51 – 2.00 ha, while the remaining 12.7% ranged from 2.01 ha and above. The mean farm size was 1.32 ha which signified that the women are smallholder farmers in active participation since there is a positive relationship between farm size and

participation. The study is in agreement with Adimado (2001) on Willingness to Pay for Research Findings: A Case Study of Pineapple Farmers in Ghana and also aligns with Langyintuo and Mekuria (2005) on improved accounting for neighbourhood influence in estimating factors determining the adoption of agricultural technologies in Rode Larenstein.

Monthly Income (₦)

The majority (75.2%) of the women had a monthly income ranging from ₦30,000 – ₦40,999, 12.4% of them in two categories had ≤₦20,999 and ₦50,000 and above respectively. The mean monthly income of women in the study was found to be ₦33,416.43. This indicates that although the women earn equivalent minimum salary wage in Nigeria, their income was not commensurable to those of men considering the problems faced by the women labour such as discrimination in wages of male and female, and poor working environment. This is in tune with Roy, Ethen, Tama, and Begum (2015) on women labour participation in rice production in some selected areas of Thakurgaon District, North West of Bangladesh.

Number of extension contact

Majority (74.6%) of the women had 1 – 2 times contact with extension agent in the last farm season, while the remaining 12.7% in two categories had 3 – 4 times and 5 times and above contact last season. The average number of contact was 1.39 in the last farming season. By implication; it meant that their access to extension service is quite poor. Their low participation in extension services have meant that issues of most concern to women have been neglected in the design and implementation of many development policies and programme. This is in agreement with Abantu for Development, (2004).

Cooperative membership

Furthermore, the majority (62.0%) of the women were not members of farmers' cooperatives, while the rest (38.0%) were. This result, therefore, justifies the low number of extension contact in the last farming season by the women. The result showed that although women were present in greater degrees in agricultural/rural organizations, they tend to comprise a low proportion of the membership and are often not represented in the higher levels of leadership. This is in line with Franklin (2007) on gender inequality in Nigeria, and Amu (2005) on the role of women in Ghana's economy.

Table 2: Socioeconomic characteristics of the women rice farmer

Sn.	Variable	Frequency (n = 347)	Percentage	Mean
1	**Age (years):**			
	≤ 29	83	23.9	
	30 – 59	218	62.8	42.48
	60 and above	46	13.3	
2	**Marital status**			
	Married	216	62.2	
	Otherwise	131	37.8	
3	**Level of education:**			
	1 – 6 years (Primary)	44	12.7	
	7 – 12 (Secondary)	174	50.1	11.85
	13 years and above (Tertiary)	129	37.2	
4	**Farming Experience (years):**			
	1 – 10	129	37.2	
	11 - 20	130	37.5	14.69
	20 and above	88	25.3	
	Household size (people):			
	1 – 5	129	37.2	5.89
	6 – 10	218	62.8	
5	**Farm size (hectares)**			
	0.01 – 1.50	216	62.2	
	1.51 – 2.00	87	25.1	1.32
	2.01 and above	44	12.7	
7	**Monthly income (₦)**			
	≤ 20,999	43	12.4	
	30,000 – 40,999	261	75.2	33,416.43
	50,000 and above	43	12.4	
8	**Extension contact (No)**			
	1 – 2	259	74.6	
	3 – 4	44	12.7	1.39
	5 and above	44	12.7	
9	**Cooperative membership**			
	No	215	62.0	
	Yes	132	38.0	

Source: Field Survey Data, 2021.

Rice Production Activities and the Extent of Women's Participation

A descriptive statistics method was adopted to analyze the rice production activities that the women were involved, as presented in Table 2. Multiple responses were allowed and the results were later ranked to prioritize the activities of interest to the women. It is important to note that the activities were classified into decision making on production and implementation. The information on decision making revealed the five ranked variables were choice of variety (80.0%), site selection (77.3%), organization of labour (74.9%), management of farm land/assets (67.4%) and allocation of different task (65.0%). On the implementation classification, the first ten (10) prioritized activities include milling (87.5%), bird scarring (80.0%), parboiling (77.4%), rice sorting (70.0%), straw drying (67.6%), weeding (67.4%), threshing (67.4%), drying (65.0%), fertilizer application (62.5%) and thinning/transplanting (62.5%), among others. These findings are in agreement with the earlier study of Subedi (2008) who contend that the production decision will help women in setting production goals. The result of implementation activities aligns with Okeke and Aluka (2017) in survey of rice production and processing in Southeast Nigeria. The study is also in line with Edeoghon et al (2019) on the study of assessment of gender participation in rice production in Abakaliki, Nigeria.

Table 3: Women participation in rice production activities

Sn.	Activities	Frequency	Percentage (%)	Ranking
A	**Decision making on production**			
1	choice of variety	278	80.0	1st
2	Site selection	268	77.3	2nd
3	organization of labour	260	74.9	3rd
4	management of farm land/assets	234	67.4	4th
5	allocation of different task	226	65.0	5th
B	**Implementation:**			
1	milling	304	87.5	1st
2	bird scarring	278	80.0	2nd
3	parboiling	269	77.4	3rd
4	rice sorting	243	70.0	4th
5	straw drying	234	67.6	5th
6	Weeding	234	67.4	6th
7	threshing	234	67.4	6th
8	drying	226	65.0	8th
9	fertilizer application	217	62.5	9th
10	thinning/transplanting	217	62.5	9th
11	spray of agrochemical	217	62.5	11th
12	seed preservation	208	60.1	12th

13	cleaning	200	57.6	13th
14	transportation and marketing	200	57.6	14th
15	planting	191	55.0	15th
16	nursery	183	52.6	16th
17	bagging	183	52.6	16th
18	hulling	182	52.4	18th
19	sorting of grain	165	47.6	19th
20	Harvesting	148	42.5	20th
21	husking	147	42.4	21st
22	winnowing	139	40.1	22nd
23	polishing	139	40.0	23rd
24	grading	139	40.0	23rd
25	de-stoning	139	40.0	23rd
26	seed bed/land preparation	95	27.5	26th
27	seedling	78	22.5	27th

Multiple responses
Source: Field Survey Data, 2021.

Women's Access to Resource Needs.

The women access to resource needs is presented in Table 4 Their resource needs were captured in 5 points Likert scale and interpreted as accessible for any item with a mean threshold of 3.0 and above, and not accessible for any item with a mean threshold of less than 3.0. A standard deviation of 0.5 and above shows that the women's responses to a particular question varied greatly. Out of the eighteen (18) items of resource needs by the women, only eight had a mean threshold of 3.0 which include land (M = 3.38), agrochemical (M = 3.50), fertilizer (M = 4.13), seeds (4.13), labour (M = 3.25), improved variety (M = 4.00), education (M = 3.38) and appropriate marketing channels (M = 3.38). The cluster mean of 2.90 is an indication that most of the resources needed by the women for rice production in the area were not accessible. This is in tune with Oluwafemi, Opeyemi, Vivian, Rita, and Aliou (2015) on gender analysis of agricultural innovation and decision making among rice farming household in Nigeria. The study is also in line with Ayoola, Dangbegnon, Daudu, Mando, Kudi, Amapu, Adeosun, and Ezui (2011) on socio-economic factors influencing rice production among male and female farmers in Northern Guinea Savanna Nigeria: lessons for promoting gender equity in action research. They noted that there was a generally low level of inputs' use for both male and females rice farmers, but the level of inputs used by female farmers was generally less than that of the male farmers.

Table 4: Women's Access to Resource Needs

Sn.	Resource need	SA	A	SWA	NA	SNA	Mean Threshold	Std. Dev.	Decision
1	Land	0	0	260.25	43.38	43.38	3.38	0.70	Accessible
2	Machineries	0	130.13	130.13	43.38	43.38	2.00	1.00	Not accessible
3	Storage facility	0	43.38	173.70	86.75	43.38	2.38	0.86	Not accessible
4	Agrochemical	0	0	216.88	86.75	43.38	3.50	0.71	Accessible
5	Fertilizer	0	0	216.88	86.75	43.38	4.13	0.78	Accessible
6	Seeds	0	0	86.75	130.13	130.13	4.13	0.60	Accessible
7	Farm implements	0	0	43.38	216.88	86.75	2.63	0.86	Not accessible
8	Irrigation facilities	43.38	86.75	173.70	43.38	0	1.63	0.70	not accessible
9	Labour	173.70	130.13	43.38	0	0	3.25	0.43	Accessible
10	Capital/credit	0	0	260.25	86.75	0	1.88	0.78	Not accessible
11	Improved variety	130.13	130.13	86.75	0	0	4.00	1.12	Accessible
12	Improved agric. technology	0	45.38	86.75	43.38	173.70	2.00	0.71	Not accessible
13	Processing facility	86.75	173.70	86.75	0	0	2.63	1.11	Not accessible
14	Electricity	43.38	130..13	130.13	0	43.38	2.63	1.41	Not accessible
15	Extension service	130.13	0	130.13	43.38	43.38	2.50	1.12	Not accessible
16	Cooperatives	86.75	86.75	86.75	86.75	0	2.25	1.09	Not accessible
17	Education	86.75	43.38	130.13	43.38	0	3.38	1.22	Accessible
18	Appropriate marketing channels	0	130.13	43.38	86.75	86.75	3.88	0.93	Accessible
	Cluster mean						2.90	0.89	Not accessible

Source: Field **Survey Data, 2021**

Key: SA (Strongly accessible), A (Accessible) SA (Somewhat accessible), NA (Not accessible), SNA (Strongly not accessible**).**

Test of Hypothesis

Access to resources needed by women rice farmers do not significantly affect their extent of participation in rice production at a household farming level in Anambra State.

Due to the large number of the sample size of respondents, a large one-way analysis of variance was adopted to investigate the effect of access to resources needed on the extent of participation by the women rice farmers in household level. The good thing about this approach is because it reports the effect size of the explanatory variable (access to resources needed) on the dependent variable (participation). Thus, table 5 shows the result of the large one-way analysis of variance (ANOVA). The coefficient of multiple determinant (R^2) value of 0.180 is an indication that access to resources needed by the women explained 18.0% level of their participation in rice farming at household level. Efficiency of access to resource needed gives the women rice farmers the ability to derive maximum output per unit of resource. With this evidence, resources needed by the women to improve their participation in rice production at household level should be looked upon by the policymakers. The result equally revealed that F-statistics value of 15.00*** is significant at 1% alpha level of probability, which shows that the model is fit and normally distributed to affect women's participation in rice production. Thus, the null hypothesis that access to resources needed by women rice farmers do not significantly affect their extent of participation in rice production at a household farming level has not been accepted. This outcome is in line with Parveen, Hossain, Kausar, Shibli, Rahhan and Ahmed (2013) in an assessment of Women Participation in Farm Household Income: A Study in some Selected Areas of Mymensingh District of Bangladesh.

Table 5 : Access to resources needed by women rice farmers do not significantly affect their extent of participation in rice production at a household farming level in Anambra State.

Source (participation)	Sum square	Degree of freedom	Mean square	F-statistics	Prob. > F
Between access to resources	5.258	5	1.052	15.00***	0.000
Within access to resources	23.906	341	0.071		
Total	29.164	346	0.084		
R^2	0.180				
Obs.	347				

Source: Field Survey Data, 2021. (*), (**), (***) Sig. at 10%, 5% and 1% respectively.

CONCLUSION

The result presented shows that average age of the women was 42.48 with majority (62.2%) of them married. About 50.1% of the women attended secondary school with an average year of formal education of 11.85. Their average farming experience was 14.69. Also, the average household size (5.89), farm size (1.32 ha), monthly income (₦33,416.43) and number of extension contact (1.39) were revealed by the study. The majority (62.0%) of the women were not members of farmers' cooperatives. The analysis shows that majority of the women play an important role in rice production activities especially in making decision concerning choice of variety, site selection, organization of labour, management of farm land/assets and allocation of different task; and, on the production implementation; milling, bird scarring, parboiling, rice sorting, straw drying, weeding, threshing, drying, fertilizer application, thinning/transplanting, spray of agrochemical, and seed preservation. The finding of the study further reveals that access to resources needed by the women rice farmers positively and significantly affected their extent of participation at 18% level in rice production at a household farming level in the study area. Hence, it was concluded that policies that would enhance rural women farmers' access to relevant inputs including machineries, storage and irrigation facilities, farm implements, credit, electricity, extension service and cooperatives would encourage greater production of rice in the area, thereby enabling them to earn more income and improve their livelihoods. The knowledge gained from the study is good to also help policymakers, structure rural interventions to create smooth cruise for the women in rice production. These policies should be inclusive in nature. The researcher further makes the following recommendations:

5.3 Recommendations

i. Considering the poor economic status of the women farmers on their individual bases, there should be more emphasis on helping them to form or join cooperative societies to enable them gain easier access to production resources such as farm mechineries, storage and irrigation facilities, farm implements, credit, extension service and cooperatives.

ii. There is the need for government to pay greater attention to ensuring that improved agricultural technologies in rice production is made accessible to women farmers particularly through employment of more women extension agents and strengthening the Women-In-Agriculture Programme of the various agricultural schemes of the government such as FADAMA, Agricultural Transformation Agenda Support Programme (ATASP), and Value Chain Development Programme (VCDP)

iii. Agricultural programs meant for rice production intervention should promote value chain development and provide processing and packaging facilities for the women to help add value to their produce which will help to increase their income status.

iv. There is the need for government particularly at the local level to make available good agrochemical, such as pesticides, herbicides, fertilizer and improved rice seeds at subsidized rate and timely delivery.

v. Women rice farmers should be encouraged to attend various developmental programmes (workshop, seminar, conference) to gain knowledge on agricultural technologies so as to increase their capacity and competitive advantage in agribusiness.

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