



***An Analysis of the Sources of Capital and Labour  
Availability to Dry Season Rice farmers In Fufore Local  
Government Area of Adamawa State, Nigeria.***

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***Abstract***

*The Study analyzed the sources of capital and labour availability to dry season rice farmer in Fufore L.G.A. of Adamawa State. A total of five (5) wards were sampled out of the seven (7) wards that constitute the area. The specific objectives were to examine the socio economic characteristics, sources of finance and labour available to dry season farmers for rice production and identify the problems faced by them. Both primary and secondary data were used for the study. Data were collected through the use of structured questionnaires and analyzed using frequencies, percentage scores and averages. 79% of the respondents were males while 21% were females, 55% of them were married, 30% single and 5% widowed. 40% of respondents were within the age range of 20 -30 years, 25% within the ages of 31–40 years. 20% within 41–50 years while 10% within 51-60 years, with 5% above 60 years. 51% had formal education while 49% had none. 24% of the respondents acquired land by inheritance, 21% acquire land by purchase, 52% through leasing, and 3% got it from their spouses. 40% of the respondents used hired labour as their source of labour, 35% of them used family members while 25% used both hired and family labour respectively. Hired labour was mostly used by respondents mainly due to the rigorous process and tedious work associated with rice production. Majority of them did not have access to institutional credit and majority of the respondents*

*acquired land on rents, this could lead to a substantial decrease in adoption of rice production technologies since more money has to be involved in acquiring larger area of land for farming. The study therefore, recommended that farmers be encouraged to participate actively in farmers/social organizations and cooperatives societies to enable them to access extension services information on capacity building and training on rice value chain aimed disseminating new and sustainable technologies to bridge the gaps created by inadequate contacts with change agents. The present land law in the area should be reviewed to make land available for farmers who wish to embark on farming projects. The government should establish micro-finance and agricultural banks in such remote areas for farmers to access loans at minimal cost.*

**Keywords:** Sources, Capital, Labour, Availability, Dry season.

## ***Introduction***

Rice is the seed of the monocot plants *Oryza sativa* (Asian rice) or *Oryza glaberrima* (African rice). As a cereal grain, it is the most widely consumed staple food for a large part of the world's human population. It is the agricultural commodity with the third-highest worldwide production, after sugarcane and maize (FAO 2012). Rice is normally grown as an annual plant, although in tropical areas it can survive as a perennial and can produce a ratoon crop for up to 30 years. World production of rice rose steadily from about 200million tones of paddy rice in 1960 to over 678million in 2009. Rice consumption in West Africa has

increased substantially over the past decade, rapidly outpacing the growth rate of local production. The importance of rice in local consumption and production varies widely across countries in the region. Coastal countries in particular, have been largely dependent on importation to meet the growing gaps between production and consumption (Awoyemi 2010).

Approximately 480 million metric tons of milled rice is produced annually. China and India alone account for 50% of the rice grown and consumed. It is one of the oldest foods of man which is taken as part of the

three meals in certain areas of the world where it has shifted from being a ceremonial food to form part of the normal daily diet and indeed an economic and political commodity. World rice consumption rate has been increasing due to increase in population strength and importance attached to it as a staple food. Between the year 1961-2002, per capital consumption of rice in the world increased by 40%. Nigeria has suitable ecologies that are suitable for different rice varieties which can be harnessed to boost production to meet domestic demand and for export (Usman, 2011). In spite of the presence of suitable environment and with increasing population over the years, the demand for the commodity has gone up to the position of prominence among all the staple food crops. Therefore, the domestic production has not been able to meet the demand, due to poor production resulting from inadequate access to production resources such as capital, inputs, fertile land and low level of farmers' knowledge of rice production. Hence, only about 1.8 million hectares, representing 39% is under rice production (Ajah and Nmadu 2012).

## **METHODOLOGY**

### **Study Area**

The study was conducted in Fufore Local Government Area, Adamawa State, Nigeria. It is one of the twenty-one LGA of the state. It lies between latitude 9°N and 15° N of the equator and longitude 12° 30'E and 13°40' E of the Greenwich meridian. The area has a total land mass of about 4,162.5km<sup>2</sup> with an estimated population of 209,460 people (NPC, 2006). It is bordered by Ganye and Mayo-Belwa LGAs to the South, Yola South to the West, Song and the Republic of Cameroun in the North and East respectively. The area is made up of seven districts namely; Daware, Gurin, Malabu, Mayo-Ine, Verre, Ribadu and Nyibango. Maximum temperature reaches as high as 40°C especially in March and April with a minimum temperatures as low as 18°C between December and January. relative humidity between January and March ranges from 20 – 30 % and reach a peak of up to 80% in August and September (Adebayo, 1997)., The mean annual rainfall is around 1000mm and major crops grown includes; rice, groundnut, guinea corn, cowpeas, vegetables of different kinds. Fishing and livestock farming are also part of the occupation of the farmer (Jongur, 2006).

## Methods

The study was conducted in five (5) out of the seven (7) wards of Fufore local government area.

A two-stage random sampling technique will be adopted for this study. The first stage is a random selection of five out of the seven wards that make up the study area. The second stage was a random selection of seventy five (75) dry season rice farmers from the respective wards.

Both Primary and Secondary data were used for the Study. The data were analyzed using frequencies, percentage scores and averages.

**Table1: Sample Size Selection Plan**

L.G.A	Ward	Sampling Frame	Sampling Size (15%)
Fufore	Daware	112	16.80
	Gurin	87	13.05
	Malabu	156	23.40
	Ribadu	95	14.25
	Nyibango	55	8.25
	Total	505	75

Source: Field Survey, 2021

## RESULTS AND DISCUSSION

### Socio-economic characteristics of the respondents

#### Sex of the Respondents

Table 2 above indicates that about 78.67% of the respondents were males while 21.33% were females. This implies that sex distribution of the rice farmers skewed towards male respondents. These findings agreed with higher male farmers as reported by Abdullahi (2012) who found out that 84% of the farmers who adopted improved rice variety were male and only 16% were female.

**Table 2: Gender of the respondents**

Sex	Frequency	%
Male	59	78.67
Female	16	21.33
Total	75	100

Source: Field Survey, 2021

### Marital status of the Respondents

The data in Table 3 below also shows that majority (30.67%) of the respondents were single, while 56% were married. Similarly, 5% were divorced or separated and another 5% widowed respectively. The high number of married respondents could increase the release of family labour, thus making more hands available for productive activities on respondents' rice farms. This result is in line with Akinbile (2010), who indicated that married people accounts for majority of rice farmer's population.

**Table 3: Marital Status**

Marital Status	Frequency	%
<b>Single</b>	23	30.67
<b>Married</b>	42	56.00
<b>Divorced</b>	05	6.67
<b>Widowed</b>	05	6.67
<b>Total</b>	75	100

Source: Field Survey, 2021

### Age of the Respondents

Table 4 below shows that 40% and 25.33% of respondents were within the age range of 20-30 and 31-40 years respectively. 20% and 10.67% of them were within the age range of 41-50 and 51-60 years respectively. Only 04% of the respondents were above 60 years of age. This indicates that young people of economic active age dominated in the study area. Moreso, young farmers are less technophobic than old farmers and may be interested in acquiring new ideas to improve their environment, and it agrees with the findings of Abdullahi (2012) which indicated that adopters of improved rice variety were mostly relatively younger farmers and were more likely to try new technologies.

**Table 4: Age of the Respondents**

Age	Frequency	%
<b>≤ 20-30</b>	30	40.00
<b>31-40</b>	19	25.33
<b>41-50</b>	15	20.00
<b>51-60</b>	08	10.67

<b>Above 60</b>	03	04
<b>Total</b>	75	100

Source: Field Survey, 2021

### **Educational Background**

Large proportion (49.33%) of the respondents had no formal education. while 28% and 20% had primary and secondary education respectively. Only 2.67% had tertiary education. This means that much needs to be done in order to raise their knowledge to a certain level if appreciable level of participation and productivity is to be achieved. In the present day business activity of any form, require working knowledge on available technology and new innovations if productivity is to be attained.

**Table 5: Educational Background**

Educational Background	Frequency	%
<b>No formal education</b>	37	49.33
<b>Primary</b>	21	28.00
<b>Secondary education</b>	15	20.00
<b>Tertiary education</b>	02	02.67
<b>Total</b>	75	100

Source: Field Survey, 2021

### **Household size**

Table 6 further shows that 13% and 85% of the respondents had less than 5 persons and 5-10 persons in their households respectively, only 2% of them had 11-15 in their households. This means that the farmers had relatively large-sized households and this may afford them the opportunity to farm since it will enable the farmers to use family labour and therefore tend to reduce the cost of hiring labour for rice productions. This result is in consonant with the study of Bola *etal*, (2012) who indicated that large household size could be used as a source of farming labour, thereby reducing the cost of labour and also cutting down production expenditure. In the same vain, a large household size could also worsen the poverty situation of farming household particularly if it was composed of a large number of dependents, which means the family had more mouth to feed.

**Table 6: Household size**

Household size	Frequency	%
<b>Less than 5</b>	13	13
<b>5-10</b>	85	85
<b>11-15</b>	2	2
<b>Total</b>	100	100

Source: Field Survey, 2021

### Mode of land acquisition

Data in Table 8 indicates that 24% of the respondents acquired land by inheritance, 21.33% of them acquired land by purchase, 52% acquired land through leasing. Only 2.67% got it from their spouses. Since majority (52%) of the farmers acquired land by lease, it could reduce their capacity to increase farm size. Thus, impair the adoption of new technologies disseminated to farmers.

**Table 8: Mode of land acquisition**

Mode of Land Acquisition	Frequency	%
<b>Inheritance</b>	18	24.00
<b>Purchase</b>	16	21.33
<b>Lease</b>	39	52.00
<b>From Spouse</b>	02	02.67
<b>Total</b>	75	100

Source: Field Survey, 2021

### Years of farming experience

Table 9 also shows that 65.33% and 17.33% of the respondents had 1 – 5 and 6-10 years of farming experience respectively, while 12% and 5.33% of them had between 11 – 15 and more than 15 years of farming experience respectively. This implies that farmers had long period of farming experience. This could increase their knowledge, and subsequent adoption of production technologies.

**Table 9: Farming experience (years)**

Experience (years)	Frequency	%
<b>1-5</b>	49	65.33
<b>6-10</b>	13	17.33

<b>11-15</b>	09	12.00
<b>&gt;15</b>	04	5.33
<b>Total</b>	75	100

Source: Field Survey, 2021

### Farm size

Table 10 also shows that 13.33% and 68% of the respondents cultivated less than 1ha and 1-5% respectively, 5.33% and 2.67% of them respondents cultivated 11 – 15ha and 16 – 20ha respectively. Only 1.33% of the respondents cultivated more than 20 hectares of land. Sahib *et al.* (1997) grouped farm holdings in Nigeria into three broad categories, small-scale (less than 6 hectares in farm size), medium-scale (6 – 9.99 hectares) and large-scale (10 hectares and above). This implies that most of the rice farmers in the area were small-scale farmers.

**Table 10: Farm size**

Farm size (ha)	Frequency	%
<b>&lt; 1</b>	10	13.33
<b>1-5</b>	51	68.00
<b>6-10</b>	07	9.33
<b>11-15</b>	04	5.33
<b>16-20</b>	02	2.67
<b>Above 20 ha</b>	01	1.33
<b>Total</b>	75	100

Source: Field Survey, 2021

### Source of Labour

Table 11 further shows that 40% and 34.67% of the respondents used hired labour and family members as their respective means of labour, while 25.33% of them used both hired and family labour as their source of labour. The fact that hired labour was mostly used by the respondents may be due to the rigorous process and tedious work associated with rice production. This result does not agree with Vinod and Arindam (2007) who said that a major characteristic of farmers was the use of family labour in their farming operation.

**Table 11: Source of Labour**



Source of labour	Frequency	%
<b>Hired labour</b>	30	40.00
<b>Family labour</b>	26	34.67
<b>Both hired and family</b>	19	25.33
<b>Total</b>	75	100

Source: Field Survey, 2021

## CONCLUSION AND RECOMMENDATION

### Summary

That majority of the respondents were the middle aged and literate. Hence, are in a better position to be aware, understand and adopt rice production technologies. It also indicated that majority of the farmers were males with long period of farming experience. More so, most of them were married with average household size of five members which is normal and this could be used as a factor to adopt rice production technologies since supply of labour is possible. Similarly, majority of the respondent engaged into farming as their major occupation and belonged to farmers' group/cooperatives. This connotes that they may have access to innovation such as rice production technologies as membership of social organizations increases interaction with sources of relevant information. Majority of the respondents did not have access to institutional credit, and also acquired land on rents and this could lead to a substantial decrease in adoption of rice production technologies since more money may be involved to acquire a large area of land for planting.

### Conclusion

Based on the results from this research, it was concluded that the dry season rice production in the study area has a brighter and sustainable prospect with high propensity to achieving selfsufficiency in food security and poverty reduction. The outcome if well disseminated will attract high participation, employment creation, income generation and thereby improving the social economic wellbeing of the farmers in the area and the nation at large. Most of the farmers access information on rice technology from friends/neighbors and received agro-inputs from input dealers. The main obstacles to adopting rice production was poor access to institutional credit and low patronage of farmers

to banks which were mainly due to high cost of capital and lack of collateral security by the farmers.

### **Recommendations**

The study therefore, recommended that farmers be encouraged to participate actively in farmers/social organizations and cooperatives societies to enable them to access extension services information on capacity building and training on rice value chain aimed disseminating new and sustainable technologies to bridge the gaps created by inadequate contacts with change agents. The present land law in the area should be reviewed to make land available for farmers who wish to embark on farming projects. The government should establish micro-finance and agricultural banks in such remote areas for farmers to access loans at minimal cost.

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