UTILIZATION OF FADAMA 111 ADDITIONAL FINANCING AMONG RICE FARMERS IN NIGER STATE NIGERIA

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ABSTRACT

The study assessed the utilization of Fadama Ill AF rice technologies among rice farmers in Niger state, Nigeria. The specific objectives were to describe the socio-economic characteristics of the rice farmers in Fadama Ill AF in the study area, and determine the factors influencing utilisation of Fadama Ill AF rice technologies by the farmers. Primary data were used for this study and these were collected with the aid of structured interview schedule. Multi-stage sampling procedure was used to select 160 respondents randomly for the study. Descriptive and inferential statistics such as multiple regression (OLS) were used to analysed the data. The age of the farmers revealed that 33% were between 40 — 49 years. The mean age of the farmers was 41 years. On the sex of the farmers,82% were male while 34% had secondary education. A total of 30% of the farmers had between 6 — 10 members of household with an average household size of 9 members. The result also showed that 21% had between 16 — 25 years of farming experience. Average farming experience was 16 years. A total of 100% had I hectare of farm size and all the farmers had contact with Fadama facilitators during the cropping year. It also revealed that only 11% had no access to credit. About 75% of the farmers had 3 4 information sources relating to the programme. All the farmers were actively committed to Fadama Ill AF programme. There average income from .rice farming was #328,081.50. The regression analysis results (OLS) shows that sex, education, farming experience, information source, contact with fadama facilitators were significant at 1% or 0.01, farm size, social organisation and age significant at 5% or 0.05 and access to credit indicated positive and significant at 10% or 0.1 with utilization of Fadama Ill AF rice technologies. The study recommended that farmers should be given more assistance to obtain credit facilities through financial institutions organisations.

INTRODUCTION

Nigeria is a key regional player in West Africa, with population of approximately 184 million, Nigeria accounts for 47 percent of West Africa's population, and has one of the largest population of youth in the world. (World bank, 2017). The Federal Government of Nigeria through the pooled World Bank loan came up with the National Fadama Development Project, to finance the development of Fadama lands which has a lot of agricultural potential than the associated upland soils. The term Fadama is a Hausa word meaning, floodable plains along major bank of rivers and streams (IDA, 2010).

The objective of the Additional Financing (AF) for the Third National Fadama Development Project for Nigeria was to increase the incomes for users of rural lands and water resources within the Fadama areas in a sustainable manner throughout the recipient's territory. The additional financing focuses on improving farm productivity performance of clusters of farmers engaged in priority food staples namely rice, cassava, sorghum and horticulture in six selected states with high potential. According to Idrisa (2009), utilization of improved technologies is an important factor to increase the productivity of small holder farmers, thereby fostering economic growth and improved their well-being.

Fadama Ill AF project has been disseminating technologically improved production techniques/inputs to rice farmers in Niger state since 2015, however little or no effort has been made to investigate the utilization rate of the various rice technologies by farmers. The research was therefore designed to describe the socioeconomic characteristics of the Fadama Ill AF rice farmers, and determine the factors influencing utilization of Fadama Ill AF rice technologies by the farmers.

METHODOLOGY

The study was conducted in Niger State of Nigeria which lies between Latitude 8^0 and $1\,1\,^020'$N and Longitudes $4^030'$ and $7^040'$E. It has a land area of 76,363 km2 (Niger State website, 2018). Multistage sampling was used in the study. Therefore, one Local Government Area (LGA) each among the agricultural zones was randomly selected giving a total of three LGAs. That is Lavun LGA from Zone A, Gurara LGA from Zone B and Wushishi LGA from Zone C.

From these LGAs three Fadama rice producing clusters were selected, with exception of Gurara LGA that has only two rice producing clusters during the last cropping season. Four production groups were selected from each cluster, giving a total of thirty-two (32) production groups. Finally, five (5) rice farmers which make 50% were randomly selected from each of the production group, giving a sample size of 160 respondents. Both descriptive and inferential statistics were used to analyse the data collected for the study.

Theoretically, the Regression model is expressed as:

$$Y = f(\beta X_i. U) \dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Where:

Y = Rice technologies utilized by the farmers, takes value between I — 14

X_i = set of explanatory variables comprising socioeconomic and institutional. U = random error term.

ß = parameters to be estimated.

$i = 1, 2, 3\dots\dots\dots\dots\dots\dots\dots$n number of independent variables.

Explicitly, the functional form model is expressed as: $Y = (30 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_{11} X_{11} + e. . .$

(2)

RESULTS AND DISCUSSION

Table 1 shows that majority (82.50%) of the farmers were male. This results implies that males have dominated rice farming in the study area. However, Olaolu et al. (2013) asserted that the Fadama rice farmers is skewed towards males in the Fadama development project.On the level of education of the farmers, those who have secondary education dominates the distribution with 34.38%. This result is in line with Onyewaku and Ohiajianya (2005) and (Tanko and Opara, 2010) as cited in Folorunso, (2015), that there is a positive relationship between education and productivity in rice production.

The result reveals that the mean age of the Fadama rice farmers in the study area is 41 years. This age represents the active group who are in their active period of life. This result is in agreement with the findings ofNIerum, (2013) who opined that active age group of between 20 to 40 years dominates the society that contributes immensely to agricultural' sectors.The study revealed that about 21.88% had farming experience between 16 — 20years. Ezeh, (2006), found that experience enhances more efficient use of scarce resources by small-farm holders.

Results on household size shows 30.63% of the farmers had household size of 6 - 10 members.

Family labour is an important component of factor of production for small-scale farmers.

This is mainly because the subsistence farm households are resource poor and depend on family labour for agriculture activities (Idrisa, 2009). Table I reveals that (100%) of the rice farmers had I hectare of land. This is as a result of Fadama Ill AF intervention that was given only to I hectare of land for farmers in other to actualized maximum output. Small land holding is a typical situation which characterised the third world countries (World bank, 2008).

Table l, shows that 88.75% of the rice farmers in the study area had access to credit. However, the study further revealed that the source of the credit was mainly from family and friends and not financial organisations. According to an earlier study by Danjuma et al. (2016) farmers have the potentials to improve their productivity but they lack the capital necessary to finance their farming activities.

The study revealed that 75.63% of the Fadama Ill AF rice farmers had between 3 – 4sources of information. According to Daudu et al. (2009), revealed that most farmers depend on extension agents and friends for agricultural information.The study shown that about 58.75% spend between 6 — 10 years in social organisation. It revealed that all the Fadama Ill AF rice farmers interviewed were 100% active members of the project. According to Gasana (201 1), farmers join social organisation for external support, cooperatives performance, market access and collective bargaining, access to input service and credits, wealth creation risk sharing.

Table l, showed that 87.50% received 24 visits. The visits were based on the Fadama facilitator's contact per annum. According to Onu, (2006), Contact with farmers plays a great role in influencing farmers adopt and utilization of improved agricultural technologies.Result from the study shows that 86.88% of the rice farmers had an annual income between #1 — #500,000. The mean annual farm income was #328,081.50. Studies by Agbamu (2006) revealed that there is a significant positive relationship between farmers' level of income and utilisation of agricultural innovation.

Table 1: Distribution of respondents by their socioeconomic characteristics

Socioeconomic Variable	Frequency	Percentage	Mean

Socioeconomic Variable	Frequency	Percentage	Mean
Sex			
Male	132	82.50	0.83
Female	28	17.50	
Level of education			
No Formal Education	18	1 1.25	
Primary	43	26.88	
Secondary	55	34.38	
Tertiary	44	27.50	
Age			
20-29	15	9.38	41
30-39	53	33.73	
40-49	54	33.75	
50-59	34	21.25	
60-69	1	0.63	
70-79	3	1.88	
Farming experience			
1-5	11	6.88	16
6-10	20	12.50	
1 1-15	33	20.63	
16-20	35	21.88	
21-25	24	15.00	
26-30	21	13.13	
31-35	1 1	6.88	
36-40	5	3.13	
Household size			
1-5	28	17.50	9.68
6-10	49	30.63	
1 1-15	41	25.63	
16-20	24	15.00	
21-25	15	9.38	
26-30	3	1.88	
Farmsize (ha)			
1	160	100	1.00
Access to credit			
Yes	142	88.75	0.89
No	18	1 1.25	
Information source			
1-2	11	6.88	3.21
3-4	121	75.63	
5-6	28	17.50	
Membership of organisation (years)			
1-5	58	36.25	6.73
6-10	94	58.75	
11-15	6	3.75	
16-20	2	1.25	
Income (H)			
I- 500,000	139	86.88	328,081.50
500,001-	19	1 1.88	

	1,500,000	2	1.25		
Contact with Fadama facilitators					
12			20	12.50	22.50
24			140	87.50	

Source: Field Survey (2018)

The coefficient of sex was significant at 1%. The positive and significant relationship between gender of the farmers and the utilization of Fadama Ill AF rice technologies also agrees with (Onu, 2006) which reported that gender plays significant role in utilization of agricultural technologies. Age of the farmers was significant at 5% level and relates negatively with utilization of Fadama Ill AF rice technologies. This implies that an increase in the age of the farmers will translates to a reduction in rate of farmers' utilization of technologies. This confirms to the study of Ibok et al. (2015) that young farmers are keen to adopt new knowledge and information faster than older farmers.

Table 2 again shows a positive and significant (1%) relationship between the level of education and utilization of Fadama Ill AF rice technologies which agrees with (Ofuoku et al.,2006; Abdul et al., 2003) that the level of education of farmers has significant relationship with innovation utilization. The coefficient of farmers' experience was significant (1%) and relates positively with utilization of Fadama Ill AF rice technologies (Table 2). The result is in consonance with the study (Ezeh, 2006), that farmers experience enhances more efficient use of scarce resources by small-farm holders. Also year of membership of social organisation was significant (5%) and positively relates with the rate of utilization of Fadama Ill AF technologies.

Contact with Fadama facilitator was significant at 1% level of probability. This implies that as contact with Fadama facilitator increase, it will translate in a corresponding increase in the rate of utilization of Fadama Ill AF rice technologies. Farm size was statistically significant at 5% level of probability. This means as farm size increase, utilization of Fadama Ill AF rice technologies increases. Access to credit was significant at 10%,The implication is that the more farmers have access to credit, the greater the rate of utilization of technologies. This agrees with the study of Danjuma et al. (2016) that sufficient capital and credit aid farmers to purchase inputs as well as to procure farm machines to ease their farming activities.

Finally, the information source shows positive and significant at 1% level of probability. This implies that the more information sources the farmers have concerning Fadama III AF rice technologies, the more the farmers utilizes technology. According to earlier studies Daudu et al. (2009), revealed that most farmers depend on extension agents and friends for agricultural information.

CONCLUSION AND RECOMMENDATION

grounds for innovations to be disseminated by

Table 2: Multiple regression analysis of factors influencing utilization of fadama iii af rice technologies by rice farmers

Variables	Estimated Coefficient	Standard Error	t-value	P-value
Constant	8.570397	0.5251743	16.32	0.000***
Sex	0.4655575	0.1503256	3.10	0.002***
Age	-0.0336822	0.0131031	-2.57	0.011**
	8.570397	0.5251743	16.32	
	0.4655575	o. 1503256	3.10	
	-0.0336822	0.0131031	-2.57	
Education	o. 1899787	0.0218478	8.70	0.000***
Experience	O. 1064868	0.0124514	8.55	
Household	0.0508341	0.0357813	-1.42	O. 158 NS
Social organisation	o. 1333786	0.0542485	2.46	
Fadama Facilitator	0.0809638	0.0127845	6.33	
Farm size	0.1161071	0.0558127	2.08	
Access to Credit	0.3164653	o. 1804455	1.75	0.082*
Income	2.69e-07	3.55e-07	0.76	0.45 I NS
Information source	0.2682218	0.0510152	5.26	0.000
R^2	0.85			
R^{-2}	0.84			
F				

Information source	0.2682218	0.0510152	5.26
0.85			
0.84			

Note: *** Significant at 1%, ** Significant at 5%, * Significant at 10%, NS Not Significant Source: Regression Extract, (2018)

Utilization of technology could assist farmers increase their production levels and income considerably. Their capacity to educate their children would be enhanced and their standards of living improved. Government should therefore assist farmers to access the more efficient factors which influence technology utilization. In areas where illiteracy level is high, the employment of extension agents and the use radios would facilitate technology utilization. Research institution and organisations related to agriculture should intensify their research efforts in breaking new

extension agents.

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