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Farmers' Access to Information on Selected Livestock Technologies in Oyo Agricultural Development Programme (ADP) Zone, Nigeria

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Abstract

The study assessed livestock Fadama users' access to information on selected livestock technologies in Oyo Agricultural Development Project zone. Multi-Stage sampling technique was used to select one-hundred and four respondents from six livestock Fadama Users' Groups (FUGs). Results indicate that more than three quarter of members of FUGs had formal education with large family size (66.3%). Fadama desk officers (99.0%), state facilitators (98.1%) and group members (98.1%) regularly served as sources of information on livestock technologies to Fadama Users. The FUGs members never had access to information on key livestock technologies like artificial insemination, automated feeding, feed formulation and creep feeding. Farmers' number of years of formal education (r= -0.09) and family size (r=0.09) had no significant relationships with respondents' access to information on selected livestock technologies. Fadama III implementing agencies should liberalize access to required information on livestock technologies for desired impact to manifest on these economic interest groups.

Keywords: Fadama users groups, information access, livestock technologies

Introduction

Nigeria is faced with the challenge of providing adequate food supply for its teeming population. The country has been consistently listed among countries that are technically unable to meet their food needs from rain-fed agriculture by Food and Agricultural Organization (FAO). This is due to low level inputs by resource poor farmers, limitations associated with sole dependence on rain-fed production and increasing demand for food by estimated population of over 150 million (Banmeke and Ajayi, 2008). Though, several government programmes had been initiated in the past to boost agricultural productions, increase income of the farmers and standard of living of farm families, Aihonsu *et al.* (2005) posited that some of the programmes have yielded results, yet many others have not achieved the objectives for which they were set up.

At the onset of the new millennium, campaign for food security and poverty alleviation took the front burners amongst other millennium development goals. One of such programmes to address food security and poverty alleviation issues was the National Fadama Development Programme (NFDP). The NFDP was bank rolled by a number of governmental and non-governmental agencies including the World Bank and the African Development Bank with counterpart funding of the three tiers of government in Nigeria. To drive the NFDP, components including capacity building, communication and information support, small-scale community-owned infrastructure, advisory services and input support, asset acquisition for individual Fadama User Groups (FUGs) and Economic Interest Groups (EIGs) were incorporated to meet strategic objectives for which Fadama

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programme was set up. These economic interest or users' groups vary from state to state in Nigeria depending on agricultural products states have potential economic advantage and higher scale of production. According to the Project Implementation Manual of Fadama III (2009), the beneficiaries were encouraged to organize themselves into economic interest groups, named Fadama User Groups (FUGs), each having on average around 20 individual members (plus benefits accruing to roughly 15 additional household members for each FUG member). This strategy is envisaged to effectively have a trickled down effect on as many individuals as possible thereby achieving the goal of poverty eradication.

One of such economic interest groups in Oyo state was the livestock groups. For livestock keepers, Fadama areas have traditionally provided access to water and dry season fodder, which is critical for the survival of their animals.

Realizing the importance of information, Fadama development programme especially Fadama III equally has as one of its very crucial components, communication and information support. The need for agricultural information has existed for thousands of years. Agricultural information is fact and knowledge base that is needed to put agricultural practices, innovations and socio-economic opportunities to best uses. It has to do with technologies, best practices, markets, price trends, consumer preferences, and sources of finance, weather, soil-moisture conditions and the environment (Singh, 2006). In the opinion of Adeokun and Akinyemi (2003), the need to provide livestock farmers with necessary and reliable information on latest developments on prevention and control of animal diseases through the veterinary extension service departments of the relevant governmental agencies has been felt more than before in the last decade. Hence, information is relevant if it leads to improved decision-making or if it reaffirms a previous decision.

It is against the opportunities offered by the two components of economic interest groups and the communication and information support that the livestock Fadama users' access to information on selected livestock technologies in Oyo ADP zone was investigated in this study. Specifically, the study sought information on available livestock technologies to farmers, source of information on these technologies and frequency of access to information on the available technologies.

Methodology

This study was carried out in Oyo Agricultural Zone of the Oyo State Agricultural Development Programme (ADP). The zone is made up of six (6) blocks with each block representing a Local Government Area (LGAs). Fadama is currently on-going in three LGAs in the zone. Multi- Stage sampling technique was used to draw sample for this study. Firstly, two out of three LGAs where Fadama is operational were selected. Secondly, there was purposive selection of all Fadama livestock users' groups in the LGAs. In all, there were six identifiable livestock groups cutting across livestock productions such as poultry, sheep/goats, cattle, fishery, piggery and snailery. One each from these groups was purposively selected. All members found in each of these groups were interviewed. This gave a total of one-hundred and four respondents. Structured questionnaire was used to collect

information from respondents on types of technologies disseminated by Fadama, sources of information and frequency of access on selected livestock technologies. Level of access to selected technologies was measured by presenting a list of selected livestock technologies to respondents and they were asked to rate access to information on these technologies in a three point rating scale of often, rarely and never and scored as 2, 1 and 0 respectively.

Results and Discussion

Personal characteristics of the livestock Fadama users

The data presented in the Table 1 reveals the personal characteristics of the livestock Fadama Users' Group in Oyo ADP Zone. According to Akangbe *et al*. (2012), the socioeconomic and personal characteristics are vital to gaining insight into the kind of persons involved in agricultural development project such as Fadama. The profile indicates that 14.5% of the members of the users' group were within the age bracket of 21-40years while 78.7% were in the age bracket of 41-60 years. The implication of this is that youths are not majority members of the Fadama livestock group. This indicates that the efforts of the government to make farming attractive and to encourage youth to take to farming as a means of livelihood has not yielded positive dividend as far as livestock farming is concerned. The youth have not been adequately mobilized to replace the aged livestock farmers whose productivity is declining. This contradicts the finding of Olajide (2011) which found most farmers in Iddo district of Oyo state belonging to a more productive and active age. This study also reveals that although both male and female are involved in livestock Fadama project in the study area but male (88.5%) dominated the users group with female constituting smaller proportion (11.5%) of membership of the group. This implies that males are more involved in Fadama livestock farming than their female counterpart in the study area. This is consistent with Akangbe *et al.* (2012) and Banmeke and Ajayi (2008) who found more male involvement in their respective studies. The table further reveals that majority of respondents had formal education as 43.4% had spent 11-15 years in school, 12.6% spent 16 – 20years, while 18.3% spent 6 – 10 years with more than one quarter (25.9%) below six years on formal education. This implies that about three quarter of the livestock Fadama Users possessed either of elementary, secondary or tertiary education. The implication of this is that the respondents might be using the knowledge gained through formal education in their livestock enterprise as farming is generally known to require some knowledge, expertise and skills which formal education provides. This corroborates Akangbe *et al.* (2012) who had earlier found that majority of rural farmers had received formal education. Furthermore, the data shows that respondents had relatively large family size as 66.3% had between four and seven children. The implication is that the relatively large household size may likely enhance family labor supply on the farms, hence supporting favorably the productive capacities of the ageing farmers. This corroborates Adegbite & Oluwalana (2004), Adegbite *et al.* (2008), Agbamu, (1993) and Okwoche *et al.* (1998) that the larger the household size, the higher the likelihood of sustainable labor efficiency on farmers' farms.

Table 1 Personal characteristics of livestock Fadama users in the study area

Variables	Frequency	%
Age		
Less than 20	-	-
21 to 30	2	2.0
31 to 40	13	12.5
41 to 50	43	41.2
51 to 60	39	37.5
61 to 70	5	4.8
71 to 80	2	2.0
Total	104	100.0
Sex		
Male	92	88.5
Female	12	11.5
Total	104	100.0
Number of Years of Formal Education		
0 to 5	27	25.9
6 to 10	19	18.3
11 to 15	45	43.4
16 to 20	13	12.6
Total	104	100.0

Source: Field survey, 2012

Sourcing for information on livestock technologies

Table 2 shows that ten sources of information on livestock technologies were available to the livestock farmers in the study area. The table reveals that Fadama desk officers (99.0%), state facilitators (98.1%), and group members (98.1%) regularly served as sources of information on livestock technologies to Fadama Users in the study area. According to Olajide (2011), appropriate combination of various communication channels is germane to ensuring that agricultural innovations reach all categories of the farming population and an important prerequisite for minimizing the time lag for both awareness and adoption of innovative practices that will ultimately boost farmers' production. It is interesting to note here that designated first hand information sources by for Fadama design lived up to their responsibilities in serving as top information sources to livestock users' group. It can further be argued that Fadama desk officers and state facilitators serving as frequent sources of information on livestock technologies speaks volumes and confirms the sensibility of the inclusion of these officers in the implementation strategy of Fadama project in Nigeria. Group members' role in frequent information dissemination is consistent with the findings of previous similar studies (Okwu and Umoru, 2009; Olajide, 2011; Ajayi *et al.* (2011); and Anttholt, 1994). The table further shows that 93.3% of the respondents occasionally received information on livestock technologies through the extension agents. This is in line with the conclusion reached by Banmeke and Ajayi (2008) who attributed the non-preference of farmers for extension agents as a source of agricultural information to poor extension services in developing countries. However, radio which is the traditional and readily available source of agricultural information occasionally (91.3%) provided information to livestock farmers in the study area. Although, this is in line with Olajide (2011), but it is grossly at variance with the outcome of many similar studies in Nigeria (Ozowa, 1995; Yahaya, 2001; Okwu and Umoru 2009; and Obidike, 2011) who have found radio to be the cheapest and the most effective means of reaching farmers with agricultural information. It remains to be seen the import of this findings especially when one considers the fact that Fadama has a dedicated radio programme for its activities. Perhaps, Fadama radio programme was not

persistently on air or due to implementation hitches was not regularly sponsored by Fadama programme. Another plausible explanation for this might be the fact that Fadama radio programme may not have effectively covered livestock related information.

Table 2 Sources of information on livestock technologies to Fadama users

S/N	Sources of Information	Regularly	Occasionally	Rarely
1	Group members	102(98.1)*	2(1.9)	-
2	Fadama desk officer	103(99.0)	1(1.0)	-
3	State facilitators	102(98.1)	2(1.9)	-
4	Extension officers	1(1.0)	97(93.3)	6(5.8)
5	World Bank/FGN monitoring team	-	1(84)	0(20)
6	Television	5(4.8)	75(72.1)	24(23.1)
7	Radio	5(4.8)	95(91.3)	4(3.8)
8	Internet	-	20(19.2)	84(80.8)
9	Pamphlets	1(1.0)	100(96.2)	3(2.9)
10	Posters/Fliers	2(1.9)	100(96.2)	2(1.9)

Note: * Figures in parenthesis are percentages

Frequency of access to information on livestock technologies by Fadama users

Having access to agricultural information is an essential ingredient that would always lead to better crop and livestock production in any community (Obidike, 2011). Data on the level of livestock farmers' access to information on livestock technologies is as presented in the Table 3. The result reveals that all (100.0%) of sheep/goat farmers as well as cattle farmers never had access to artificial insemination. Other technologies these groups never had access to be automated feeding and feed formulation, creep feeding, bucket feeding, wet feeding and fostering. Similar pattern is observed for piggery. However, though some level of access was available for despurring (100.0%), vaccination (95.2%) and quarantine services (85.7%), the access was rare. For fishery and snailery component, most of the technologies relevant to these economic interest groups were never accessible. Therefore, it can be safely concluded that livestock Fadama farmers in the study area generally had low level of access to information on livestock technologies. This corroborates Obidike (2011) and Ozowa (1995) that farmers in Nigeria seldom feel the impact of agricultural innovation either because they have no access to such vital information or because it is poorly disseminated. Aina (2007) associated inadequate financial power of farmers in Africa, illiteracy, lack of basic infrastructure, such as telephone, electricity, good road network, pipe borne water etc, with low access to agricultural information.

Relationship between personal characteristics of livestock Fadama users and access to information on selected technologies

The results of the relationship between Fadama users' personal characteristics and their access to information on livestock technologies in Table 4 show that age (r= 0.14), number of years of formal education (r= -0.09), family size (0.09), sex $\chi^2 = 2.77$) and marital status ($\chi^2 = 2.14$) had no significant relationships with respondents' access to information on selected livestock technologies. This suggests that Fadama users' age, education and marital status do not influence their access to the needed information on livestock technologies.

Table 3 Frequency of access to information on livestock technologies by Fadama users

S/N	Technologies	Quite Often	Rare	Never	S/N	Technologies	Quite Often	Rare	Never
	Sheep/Goat Group					**Cattle Group**			
1	**N=26**	-	-	26(100.0)*	1	**N=20**	-	-	20(100.0)*
2	Artificial	-	8(30.8)	18(69.2)	2	Artificial	-	16(80.0)	4(20.0)
3	Insemination	-	25(96.2)	1(3.8)	3	Insemination	-	19(95.0)	1(5.0)
4	Pregnancy test	-	-	26 (100.0)	4	Pregnancy test	-	-	20 (100.0)
5	practice	-	-	26 (100.0)	5	practice	-	-	20 (100.0)
	Vaccination					Vaccination			
6	Automated	-	-	26 (100.0)	6	Automated feeding	-	-	20 (100.0)
7	feeding	-	-	26 (100.0)	7	Computer method of	-	-	20 (100.0)
8	Computer method	-	-	26 (100.0)	8	feed formulation	-	-	20 (100.0)
9	of feed	-	-	26 (100.0)	9	Wet feeding	-	-	20 (100.0)
10	formulation	1(3.8)	23(88.5)	2(7.6)	10	Creep feeding	-	18(90.0)	2(10.0)
11	Wet feeding	-	3(11.6)	23(88.4)	11	Bucket feeding	-	13(75.0)	7(35.0)
12	Creep feeding	-	1(3.8)	25(96.2)	12	Fostering	-	-	20(100.0)
13	Bucket feeding	-	24(92.4)	2(7.6)	13	Quarantine	-	17(85.0)	3(15.0)
14	Fostering	-	17(65.4)	9(34.6)	14	Flushing/steaming up	-	5(25.0)	15(75.0)
	Quarantine					Estrus synchronization			
	Flushing/steaming				1	Dehorning	-	-	-
1	up	-	-	15(100.0)*	2	Castration	-	20(95.2)	1(4.8)
2	Estrus	-	-	15(100.0)	3	**Poultry Group**	-	-	21 (100.0)
3	synchronization	-	13(86.7)	2(13.3)	4	**N=21**	-	-	21 (100.0)
4	Dehorning	-	-	15 (100.0)	5	Artificial	-	-	21 (100.0)
5	Castration	-	-	15 (100.0)		Insemination			
6		-	-	15 (100.0)	6	Vaccination	-	-	21 (100.0)
	Piggery Group				7	Automated feeding	-	18(85.7)	3(14.3)
7	**N=15**	-	-	15 (100.0)	8	Roof insulation	-	-	21 (100.0)
8	Artificial	-	-	15 (100.0)	9`	Computer method of	-	-	21 (100.0)
9	Insemination	-	-	15 (100.0)	10	feed formulation	-	-	21 (100.0)
10	Pregnancy test	-	-	15 (100.0)	11	Wet feeding	-	21(100.0)	-
11	practice	-	15(100.0)	-	12	Quarantine	-	-	21 (100.0)
12	Vaccination	-	-	15 (100.0)		Drug admin through			
	Automated				13	gun	-	-	21(100.0)
13	feeding	-	14(93.3)	1(6.7)		Caponisation			
14	Roof insulation	-	-	15(100.0)		Despurring			
15	Computer method	-	-	15(100.0)		Debeaking			
16	of feed	-	2(13.3)	13(86.7)	1	Measuring egg shell	1(5.9)	15(88.2)	1(5.9)
17	formulation	-	14(93.3)	1(6.7)	2	thickness	-	-	17(100.0)
18	Wet feeding	-	-	15 (100.0)		Artificial incubation			
	Creep feeding				3	**Fishery Group**	-	-	10(58.8)
	Bucket feeding				4	**N=17**	1(5.9)	1(5.9)	2(11.8)
	Fostering				5	Vaccination	-	-	14(82.4)
	Quarantine				6	Computer method of	3(17.6)	3(17.6)	9(52.9)
1	Drug admin	-	-	5(100.0)*	7	feed formulation	-	-	17(100.0)
2	through drenching gun	-	-	5(100.0)		Quarantine Feed pelleting			
	Flushing/steaming up				8	Pond inoculation	-	-	17(100.0)
	Estrus synchronization					Pond liming			
	Dehorning					Dipping fish in 5 – 10% malachite green before introducing into pond			
	Castration								
	Teeth clipping					Artificial propagation			
	Admin of iron dextrin injectionat 1st and 3rd week of birth								
	Snailery Group N=5								
	Quarantine								
	Artificial incubation								

Note: * Figures in parenthesis are percentages

Table 4 Correlation analysis of relationship between personal characteristics of livestock Fadama users and access to information on selected technologies

Variable	N	Df	Pearson Correlation	X^2 value	p value	Decision
Age	104	-	0.14	-	0.160	Not significant
Years of formal	104	-	-0.09	-	0.378	Not significant
education	104	-	0.09	-	0.323	Not significant
Family size	-	1	-	2.77	0.096	Not significant
Sex	-	3	-	2.14	0.543	Not significant
Marital Status						

Conclusion and Recommendations

From available data in this study, it is evident that members of Fadama users' group are mostly male, had one form of formal education or the other and with fairly large family size. Fadama desk officer, state facilitators and group members serve as ready sources of information on livestock technologies to Fadama Users. In spite of these, all categories of Fadama users group never had access to information on required and recommended livestock technologies. However, Fadama users' age, sex, education and family size do not affect their access to information on livestock technology. It is recommended that Fadama III implementing agencies should liberalize access to required information on livestock technology for the programme to have desired impact on these economic interest groups.

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