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THE IMPACT OF THE SECOND NATIONAL FADAMA DEVELOPMENT PROGRAM ON THE STANDARD OF LIVING OF DADIN-KOWA COMMUNITY OF YAMALTU-DEBA LOCAL GOVERNMENT OF GOMBE STATE (2004-2010)

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ABSTRACT

This study investigated the impact of Fadama II Project on the standard of living of the people of Dadin-Kowa community of Yamaltu-Deba Lcal Government Area of Gombe State. Data were generated using the structured questionnaire using simple descriptive and cost/return analysis. The result revealed that most farmers were females (67%) and had informal education (48%). Furthermore, about (50%) of the sampled farmers are aware of modern technology transfer through extension agents and majority of the farmers used the benefit derived from Fadama Irrigation Project to acquire assets (35.8%), educate children (29%). The production and cost analysis revealed that irrigation farming is profitable. However, the 10% counterpart contributions by the beneficiaries and elites interference were the major implementation problems among others. To fully actualize the potentials of agriculture and the rural community through Fadama II, there is need to review the 10% beneficiary contribution, ensure prompt release and disbursement of funds/input through associations thereby reducing elites interference and a complete re-orientation package in form of public enlightenments, talks and seminars should be embarked upon in order to change the attitudinal disposition of youths in the study area towards agriculture.

Keywords: Standard of living, irrigation, agriculture, rural community

INTRODUCTION

Nigeria is basically an agrarian economy with about 85% of the population depending on agriculture. Agriculture has the highest poverty incidence rate (62.7%) among all occupational groups considered in the Nigerian Living Standard Survey (FOS, 2004). A high proportion (48.3%) of Nigeria's active population is involved in agriculture and this group also has the highest poverty dept (26.1%) and severity respectively. These poor outcomes were attributed to low productivity, poor agricultural produce price; hence poor farm income, inadequate infrastructure and limited access to credit and improved farm inputs (Babatunde *et. al.,* 2007).

It has been estimated that more than 80% of all the poor, live in the rural areas and 9% of these live in absolute poverty, but studies world-wide have shown that most of the poorest poor (75-85%) are in agricultural employment and are usually small scale operators, tenants and landless" (Kolawole *et. al.,* 2006). The Nigerian farmers are mostly located in the rural areas characterized by poor health facilities, poor road networks, inefficient or poor basic amenities. All these are due to mismanagement and improper development policies. These have led to low productivity in the agricultural sector which in turn has led to poor standard of living and high incidence of poverty in Nigeria (World Bank, 1996).

The Federal Office of Statistics/World Bank in their analysis of the poverty trend in Nigeria has established that poor families are in higher proportion in farming households that are mainly in the rural areas (FOS, 2004). Thus it is imperative that any policy measure aimed at alleviating poverty must focus on agriculture and rural development. With this in mind, the Fadama Irrigation concept emerged in one of the World Bank assisted program with the launching of the National Fadama

Development Project (NFDP) in the early nineties. Fadama farming, which is synonymous to irrigation farming system, is an agricultural practice in northern Nigeria, where land that floods on seasonal basis or located on river beds allows for the growth of a variety of crops on a small scale.

As a follow up to the First National Fadama Development Project (1993-1999), the World Bank and the African Development Bank (ADB) jointly supported the Federal Government of Nigeria to invest in a Second National Fadama Development popularly known as Fadama II project. The implementation of the Fadama II project commenced in January 2004 and as expected concluded in 2010. It was expected among other things to increase the level of farmers' income, employment and reduce the level of poverty among farmers, thereby increasing the standard of living of the rural areas. Over the years, the constructions of large-scale irrigation schemes have not been totally successful. Rather, such approaches have resulted in low economic return, negative environmental impacts increased differentiation between rural producers and the undermining of the potentials of indigenous system of Fadama irrigation (Musa, 1996). The main problem confronting the Fadama irrigation project is how to assist small-scale farmers so that sufficient and high quality commodities can be produced to meet the increasing demand and alleviate the associated problem of rural poverty (Kolawole, 1994). Thus, it is necessary to examine the level of impact of the just concluded program.

The main objective of the study is to analyse the impact of National Fadama development project II on the standard of living of Dadin Kowa community of Yamaltu-Deba local government area of Gombe State. The specific objectives are to: determine the socio-economic characteristics of farmers in the study area; identify the most effective method of technology transfer of irrigation system in the study area; identify the benefits derived from the fadama project by the small-scale farmers; analyse the production cost and returns of the fadama farmers, and highlight problems of Fadama II Project implementation.

METHODOLOGY

The study was conducted in Dadin Kowa community located in Yamaltu- Deba Local Government Area of Gombe State. The people according to oral tradition are known as Tera and were believed to have migrated from Yamen in Saudi Arabia in 1704. The community is located in the northern part of Gombe State and majorly depend on agriculture as source of livelihood. Dadin kowa which was established in 1751 is the seat of the Yamaltu Emirate Council and the popular Dadin Kowa dam, supplies Gombe metropolis and its surrounding villages with water. The community is blessed with flood plains known as Fadama lands, as a result of the Dadin Kowa River, a tributary to river Benue makes both ground water and surface water available and accessible. It is basically an agrarian society and is blessed with agricultural products such as sorghum, millet, cotton, vegetables, rice, maize, groundnut, banbara-nut, as well as fruits. With farming as a major source of livelihood, other commercial activities engaged by this people include weaving, fishing, hunting among others.

Stratified random sampling technique was used for the study. Dadin-kowa community was purposively selected because it has the highest population of Fadama II beneficiaries. About 140 respondents were randomly selected and 128 turned out fit for the study. Both primary data and secondary information were employed for the study. Trained enumerators were used to administer the structured questionnaires to the respondents. Secondary sources of information include government publications, journals as well as past projects and research reports. Descriptive statistics (percentages, mean, etc) and gross margin techniques were used to analyse the data obtained from respondents.

RESULTS AND DISCUSSION

Socio-economic characteristics of Respondents

Socio-economic characteristics play significant role in the farmers' lives in the sense that they influence willingness to adopt an innovation which contributed significantly in raising farm productivity and ultimately their standard of living. The variables considered were age, sex, level of education, household size, farm size, farming experience, land acquisition and other estimated

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variables such as types of crop grown, method of technology transfer and benefits derived from Fadama Irrigation Project.

Table 1: Socio-economic Characteristics of Sampled Farmers.

Variables	Number of respondents	Percentage of Total
Age		
21-30	7	6
31-40	22	17
41-50	34	26
51-60	52	41
61-70	13	10
Sex		
Female	86	67
Male	42	33
Level of Education		
Primary	39	30.5
Secondary	21	16.4
Tertiary	6	5
Household Size		
1-5	37	29
6-10	71	55
11-15	18	14
21-25	2	2
Farm Size		
0-0.25	15	11.7
0.26-0.5	16	12.5
0.6-0.75	65	50.7
0.76-1.0	32	25
Farming Experience in Fadama		
0-5	42	33
6-10	71	56
11-15	12	9
16-20		
Method of Land Acquisition		
Inherited	87	68
Purchased	29	23
Borrowed	7	6
Rented/Hired	4	3

Source: Field survey, 2010

Table 1 shows that 90% of the respondents were under the ages of 60 years. This is considered as the economically active age which could positively affect farm output. Obeta *et. al.,* (1991) opined that younger traders are more amenable to new ideas, risk and are more receptive to modern technologies. It is noteworthy that 67% of the farmers were females, 33% were males.The Nigerian constitution provides for at least 30% female representation in governance and government programmes activities, public services as well as those of the private sector. It is obvious that women are now actively participating in agriculture. In Dadin- Kowa community, women are actively involved in local rice production while most men are involved in animal husbandry especially cattle rearing. The study also revealed that most farmers were literate informally and very few were literate formally. Njoku (1991) however posited that formal education has positive influence on adoption. About 69% of the farmers have large household size which relatively contributes to labour force on the farm but could significantly influence household expenditure pattern. Most farmers (51%) cultivated land between

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0.6-7.5ha and 89% have been involved in Fadama farming for about 10 years. This shows that they acquired good experience in irrigation farming. It is noteworthy that most farmers (68%) acquired their land by inheritance. Since land is the most important fixed asset of the farmer, its method of acquisition is of utmost importance.

Table 2: Other Estimated Parameters

Variables	Number of Respondents	Percentage of Total
Types of crops grown		
***Multiple Response**		
Rice (main crop)	114	29.1
Sorghum	72	18.4
Maize	66	16.8
Pepper	58	14.8
Tomatoes	32	8.2
Spinach	26	6.6
Okro	24	
	6.1	
Method of Technology Transfer		
*** Multiple Response**		
Extension Agent	83	50
Radio	36	22
Television	29	17.5
None	18	10.8
Benefits Derived From Fadama		
Farming * Multiple Response		
Assets Acquisition (land, building, motor cycle, bicycles, etc)	76	35.8
Children Education	62	29
Family Upkeep	56	26.4
Business	12	5.7
Marrying more wives	6	2.8

Source: Field survey, 2010

Mixed cropping is a common practise among Fadama farmers. Table 2 indicates various crops cultivated in the study area which includes rice (29.1), sorghum (18.4%), maize (16.8%), pepper (14.8%) among others. It is important to note that irrigation farming makes available some food crops during the dry season. Irrigation farming therefore serves as an alternate source of income and employment thereby reducing rural poverty and hence food security. Farmers are exposed to modern technology transfer and farming practices through extension agents (50%), radio (22%), television (17.5%). This improves output and ultimately raises farmers' standard of living.

As observed byAnyawale *et. al.,* (2004), Fadama Irrigation Project was meant to assist the qualifying states of the Federation among others to finance the provision of infrastructures in Fadama lands for small scale irrigation and other agriculture related activities, organizing Fadama farmers for irrigation management, cost recovery and better access to credit, marketing and other services. "It is believed that the provision of these facilities would not only boost agricultural production but enhance the income of the farmers and thereby lift them out of the vicious circle of poverty". It is obvious that the Fadama II project in the study area has achieved its objectives as farmers attest to the benefits derived from the project which includes acqucision of assets (35.8%), children education (29%) and family upkeep (26.4%) among others.

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Table 3: Average production cost and returns of the Fadama Farmer.

Items (Cost and Revenue)	₦/ha(Cost)	Percentage of Total
Variable Cost		
Seed/seedlings	2,655	4.34
Fertilizer	12,000	19.61
Chemical	4,000	6.53
Fuel	8,650	14.10
Transportation	1,050	1.71
Maintenance	4,750	7.76
Bags/baskets	1,630	2.66
Labour	26,440	43.22
Total Variable Cost (TVC)	**61,175**	
Fixed Cost		
Depreciation of equipment	8,850	79.37
Land rented	2,300	20.63
Total Fixed Cost (TFC)	**11,150**	
Total Cost (TC)	**72,325**	
Total Returns (TR)	**268,545**	
Net Farm Income (NFI)	**196,220**	
Return per naira invested	**2.71**	

Source: Field Survey (2010)

The costs and returns estimates of a Fadama farmer per hectare are reflected in Table 3 above. Accordingly, cost of labour has the highest proportion with 43% of the total variable cost while the cost transportation has the lowest (1.7%). This implies that most of the variable costs were incurred on labour as Fadama farming is labour intensive and labour cost tend to be very high in the study area. Almost all the farmers live near their farm that is why transportation cost is low. The total cost (TC) per hectare was ₦73,325 and the total returns (TR) per hectare was

₦268,545. The net farm income (NFI) was therefore estimated to be ₦196,220. Returns per naira invested is 2.7 which implies that Fadama farming in the study area is profitable.

Table 4: Fadama II Project Implementation Problems

Problems	Frequency	Percentage
10% beneficiary contribution	65	28.5
Elite interference	52	22.8
Delay in the release of funds	46	20
Poor monitoring and coordination	38	16.7
Unethical conduct by some facilitator and officials	27	11.8

Source: Field Survey (2010)

*Multiple Responses

Most beneficiaries as stated in Table 4 observed that 10% beneficiary contribution (28.5%), elite' interference (22.8%), delay in the release of funds/inputs (20%) are the major challenges experienced among others. The problems of illiteracy as observed in table1could also hinder the successful implementation of the Fadama II Project most especially that majority of the beneficiaries are females.

CONCLUSION AND RECOMMENDATION

The study revealed that there is a tremendous impact of the Fadama II Project on the standard of living of Dadin-Kowa community of Yalmatu-Deba Local Government Area of Gombe State.The production cost-return analysis indicated that the irrigation farming was profitable and farmers' derived

significant benefits from the program.To fully actualize the potentials of agriculture and the rural economy through Fadama II, the following recommendations, are proffered:

a. There is need to review the 10% beneficiary contribution.
b. Ensure prompt release and disbursement of funds/input
c. A complete re-orientation package in the form of public enlightenments, talks and seminars should be embarked upon in order to change the attitudinal disposition of the youths towards agriculture.
d. Implementation of effective monitoring and coordination machinery by the government cannot be overemphasised.

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