



THE EFFECT OF NATIONAL FADAMA DEVELOPMENT PROJECT III (NFDP III) ON BROILER FARMERS' INCOME IN LAFIA LOCAL GOVERNMENT AREA OF NASARAWA STATE, NIGERIA



H. S. Umar, C. O. Sule and E. G. Onuk

Department of Agricultural Economics and Extension,
Nasarawa State University, Keffi, PMB 135, Shabu-Lafia

Received: May 28, 2012; **Accepted:** July 07, 2012

Abstract

The National Fadama Development Project targets the sustainability of increased income of the fadama user groups (FUGs) in the country. Hence, the study as a mid-term survey was carried out to examine the effect of National Fadama Development Project III on broiler farmers' income in Lafia Local Government Area of Nasarawa State. Primary data were collected using structured sets of questionnaire and personal interviews conducted on both beneficiary and non-beneficiary groups of Fadama III Project. Simple descriptive statistics, Net Farm Income (NFI) and T-test were used to analyze the objectives. The results showed that the mean of NFI for beneficiary group was ₦196,009.42 while non-beneficiary group was ₦198,333.6 though the difference in income between the two groups was statistically insignificant implying that NFDP III has not effected on the income of beneficial group. Delay in disbursement of funds, inadequate funding support and lack of ownership spirit among fadama user-groups of broiler enterprise were major constraints to implementation of the project in the area. It is therefore recommended that counterpart funding from the state government should be made available in good time to facilitate early and adequate disbursement of fund and ownership spirit should be instilled in the fadama user groups (broiler farmers) to ensure better resource management for greater output and increased income.

Keywords: Effect, beneficiary and non-beneficiary groups, Fadama III project.

INTRODUCTION

The goal of increasing food production, reducing food import and poverty level has elicited many programmes and policies at the various level of government in Nigeria. The first was the establishment of River Basin Development Authorities (RBDAs) in the early '70s and by the late 1980s, the development of small-scale irrigation systems in Fadama land areas commenced (Kudi *et al.*, 2008). In 1993, the Federal Government of Nigeria in collaboration with the World Bank and State Governments started a new programme referred to as the National Fadama Development Project.

The National Fadama Development Project III is a follow-up on the second phase. The project assisted by the World Bank covered the thirty-six states and the Federal Capital Territory (FCT). The Fadama III project is implemented using the community demand driven (CDD) approach which strongly emphasizes stakeholders participation at the community level to develop participatory socially inclusive Local Development Plans (LDPs) which provides the basis for support and funding under the project (PCU – NFDO, 2005). This paradigm shift from the traditional public sector dominated supply led development approaches of the past to a private sector led demand driven strategy, ensures full guidance of participatory farmers through several institutional structures. The various Fadama resources users, including livestock farmers, crop farmers,

pastoralists, fishermen and women, and off-farm entrepreneurs operating through their respective Fadama Resources User Groups (FUGs) and their apex bodies, the Fadama Community Association (FCAs) agree on a consensus on how to use the common resources for their mutual advantage. Through this process, communities decide on the advisory services and infrastructures they need to enable them attain development goals they set for themselves based on their efforts. The consensus so reached are articulated in Community Development Plans (CDPs) drawn at the level of the Fadama Community Association (FCAs). The major function of the Fadama development offices at federal, state and local government area levels include planning, advisory, monitoring, management and supervision. However, facilitators are hired by the state Fadama users groups to guide them through the intensive

NSUK Journal of Science & Technology, Vol. 2, No. 1&2, pp 79-84 2012

The development objective of Fadama III project is to increase the incomes of users on a sustainable basis. By increasing their income, the project helps to reduce rural poverty, increase food security and contribute to the achievement of a key Millennium Development Goal. The project directly delivers resources to the beneficial rural communities and empowers them to collectively decide on how resources are allocated and managed for their livelihood activities and to participate in the design

and execution of their sub-projects. By achieving these objectives, the welfare of the rural households would be improved with the attendant multiplier effect on the participating community as a whole (Chima & Nwachukwu, 2007). One of the fastest growing segments of the animal industry is that of the poultry industry. The poultry industry occupies a unique position in the Nigerian livestock market production possibilities because almost all cultures accept poultry as a wholesome meat for human consumption (Oluyemi & Roberts, 2000). Poultry meat is an important source of high quality proteins, minerals and vitamins to balance the human diet. Specially developed breeds of chicken (broilers) are now available with the trait of quick growth and high feed conversion efficiency. Depending on the farm size, broiler farming can be a main source of family income and gainful employment for farmers throughout the year. Poultry offers great potential for improving the nutritional levels of the people. It requires a low initial investment and minimal inputs in terms of feed, equipment and housing, and they are generally fairly prolific (FAO, 2007). Some of the factors which favoured the growth of poultry farming generally are: small initial investment, availability of trained manpower, better understanding and knowledge of the improved and scientific methods of feeding, availability of quality chicks, and better returns compared to other livestock species (Howard & Moore, 2002). The National Fadama Development Project III has been in existence in Nasarawa State and indeed Lafia Local Government Area since the year 2008. Broiler production which plays a significant role in the economy of Nigeria forms a substantial part of the NFDP III in the Local Government Area. It is believed that the provision of the facility by Fadama III Project would not only boost agricultural production but enhance the income of the farmers (particularly broiler farmers) and thereby lifting them out of the vicious cycle of poverty (Ayanwale & Alimi, 2004).

Hence, this study as a mid-term survey is intended to assess the effect of the National Fadama Development Project III (NFDP III) on broiler farmers' income in Lafia Local Government Area of Nasarawa State. Specifically, study identified the productive inputs acquired from Fadama III Project, estimated and compared the farm income of the beneficiary (broiler farmers) and non-beneficiary (broiler farmers) of Fadama III Project, and identified constraints to implementation of the Fadama III Project in the area.

Hypothesis

The null hypothesis is stated as follows: There is no significant difference between income of Fadama III poultry (broiler) farmers and non-Fadama broiler farmers.

MATERIALS AND METHODS

Study Area

This study was conducted in Lafia Local Government Area of Nasarawa state. The population of the area is about 330,712 people (NPC, 2006). Lafia is located between latitude 07°09'N and longitude 07°09'E, with altitude of 18.5m above sea level (NSMI, 2006). The area is bordered by Obi Local Government Area to the South, Nasarawa Eggon to the North, Doma Local Government to the West and Quan Pan Local Government Area of Plateau State to the East. The main ethnic and language groups are Eggon, Gwandara, Kanuri and Migili. Lafia is made up of eight districts mainly; Agyaragu, Adogi, Akumza, Shabu/kwandare, Lafia city, Barkin Abdullahi, Arikya and Assakio.

Sampling Techniques and Sampling Size

There are 14 registered FUGs of poultry enterprise in the Local Government Area. Twelve functional FUGs of poultry enterprise were purposively selected from the area. One poultry household (broiler household) was selected as a representative from each of the twelve FUGs. Also, out of the eight districts that make up Lafia LGA, four districts were purposively selected because of the intensity of poultry production in the areas compared to the remaining districts. Three poultry farmers (non-Fadama III broiler households) were randomly selected from each of the four districts making a total of twelve non-Fadama III beneficiary (broiler farmers). Thus, the sample size was twenty-four; made up of twelve farmers (beneficiary of Fadama III Project) of broiler enterprise and twelve non-Fadama beneficiary (broiler farmers).

Data Collection

Primary data were used for the study. They were collected through sets of questionnaire administered to beneficiary and non-beneficiary groups of Fadama III Project. Data were collected on broilers farmers' inputs (labour, feed, day-old), output of broiler enterprise and constraints to implementation programme.

Data Analysis

Simple descriptive statistics, Net Farm Income were used to achieve objectives of the study. T-test was used to test the hypothesis.

Net Farm Income: $NFI = GR - TC$

Where

The Effect of National Fadama Development Project III (NFDP III) on Broiler Farmers' Nasarawa State, Nigeria

P_y = unit price of broiler (₦);

Y = Number of broilers; TC = Total Cost (₦); TVC = Total variable cost (₦) (this includes the cost of feeds, day-old, medication, labour);

TFC = Total fixed cost (₦) (this includes depreciation of poultry houses, equipment etc).

Using straight line method:

$$\text{Depreciation } D = \frac{P - S}{n}$$

Where;

D = Depreciation; **S** = Salvage value;
n = No. of useful years.

$$\text{T-test: } T = \frac{\frac{X_b - X_n}{\frac{S_{b^2}}{n_b} + \frac{S_{n^2}}{n_n}}}{\sqrt{\frac{S_{b^2}}{n_b} + \frac{S_{n^2}}{n_n}}}$$

Where;

T = t-test

X_b = Mean of broiler farmers' income engaged in Fadama III Project

X_n = Mean of broiler farmers' income (non beneficiary of Fadama III Project)

S_b² = Variance of broiler farmers' income (Fadama III beneficiary)

S_n² = Variance of broiler farmers' income (non-beneficiary of Fadama III)

N_b = Number of respondents (Fadama III beneficiary)

n_n = Number of respondents (non-beneficiary of Fadama III)

RESULTS AND DISCUSSION

Productive Inputs Acquired from Fadama

The Fadama III Development Programme did not make provision for productive inputs for poultry farmers instead they gave financial support of ₦225,000.00 to each Fadama User Group (FUG) to enable them get inputs from the open market. Hence they bought from the same open market like the non-beneficiary (Table 1).

Table 1: Amount of funds acquired from Fadama III Project

Name of FUGs	Amount d Isbursed
Hikima	₦225,000.00
Peaceful Sisters	₦225,000.00
Anda	₦225,000.00
Amale	₦225,000.00
Zumunci	₦225,000.00
Noble women	₦225,000.00
Shokora	₦225,000.00
Maifata	₦225,000.00
Mafarauta	₦225,000.00
Joyster	₦225,000.00
Alheri	₦225,000.00
Adogi	₦225,000.00

Source: Field Survey, (2011).

Net Farm Income of beneficiary and non-beneficiary groups of Fadama III project

Table 2 shows that on the average, total variable cost (TVC) for beneficiary per 200 birds was ₦98,903.22 while that of the non-beneficiary was ₦95,110.97. This shows that beneficiary group incurred higher TVC. The higher variable cost incurred by the beneficiary group is supported by Ibrahim & Onuk (2010). On the average, total fixed cost of the non-beneficiary (₦3,641.45) was higher than beneficiary (₦2,995.17.) But the total cost incurred by beneficiary (₦101,878.41) was higher (₦98,752.42) than that incurred by non beneficiary of the project on

the average . The average gross returns for the beneficiary group was ₦305,723.94/200 birds while non-beneficiary group was ₦309,852.22/200 birds. The reasons for higher gross return accruable to non-beneficiary group were probably due to ownership spirit demonstrated in running the business and longer years of experience which translated to better management. The net farm income (NFI) for the beneficiary and non-beneficiary were ₦196,009.42 and ₦198,333.69 on the average. This shows that non-beneficiary earned higher Net Farm Income (profit) of about 1.2 % than beneficiary group.

Table 2: Net Farm Income of beneficiary and non-beneficiary groups of Fadama III Project

S/NO	Variables	Beneficiary		Non-Beneficiary	
		Average cost/200 birds (₦)	Average gross income/200 birds (₦)	Average cost /200birds (₦)	Average gross income/200 birds(₦)
(A)	Variable inputs				
(i)	Day-old	40,666.67		41,000	
(ii)	Medication	5,838.95		5,540.28	
(iii)	Disinfectant	1,403.66		1,226.25	
(iv)	Labour	10,056.15		9,450	
(v)	Feed	40,643.69		37,894.44	
(vi)	Others	294.12		—	
(B)	TVC	98,903.24		95,110.97	
(C)	Fixed inputs				
(i)	Poultry house	2,208.33		2,239.42	
(ii)	Heater	268.89		223.28	
(iii)	Feeders	311.81		633.89	
(iv)	Drinkers	165.97		544.86	
(v)	Others	40.17		—	
(D)	TFC	2,995.17		3,641.45	
(E)	Total cost	101,898.41		98,752.42	
(F)	Gross returns	305,723.94		309,852.22	
(G)	NFI	196,009.42		198,333.69	

Source: Field Survey (2011).

TVC– Total Variable Cost; TFC– Total Fixed Cost; NFI– Net Farm Income

Test of Hypothesis

Table 3 shows that the mean income for the beneficiary and non-beneficiary groups were ₦196,009.42 and ₦198,333.69 respectively. The variance for beneficiary was 3895049891 while that of the non-beneficiary group was 7638016967. The number of respondents for both samples was 12 each. The calculated t-value was

–0.0000024 while the table value was 1.717. Thus, the null hypothesis is not rejected because the calculated value is less than the tabulated t-value (insignificant at 5 % levels). Thus, there is no significant difference between income of beneficiary and non beneficiary groups of Fadama III Project engaged in broiler enterprise in the area.

Table 3:–Hypothesis testing

Variables	Beneficiary	Non-beneficiary
X_b	₦196,009.42	—
X_n	—	₦198,333.69
Sb^2	3895049891	—
Sn^2	—	7638016967
n_b	12	—
n_a	—	12

Source: Field Survey (2011).

Constraints to the Implementation of the NFDPIII in Lafia Area

Table 4 shows that major constraints to effective implementation of the NFDPIII were delay in disbursement of funds, inadequate funding support, untimely counterpart funding from state government and lack of ownership spirit by the FUGs. Agwu & Abah (2009) identified the same constraints.

Table 4: Constraints to the implementation of the NFDP III

Items	Frequency	Rank
Delay in disbursement of funds	12	1
Inadequate funding support	10	2
Untimely counterpart funds from state government	5	3
Lack of ownership spirit by the FUGs	3	4

Source: Field Survey, (2011).

CONCLUSION

The Net Farm Income of the beneficiary of fadama III project (₦196,009.42) was lower than non-beneficiary group (₦198,333.69) of broiler enterprise. The income differentials could be probably due to longer experiences in poultry production and ownership spirit shown by non beneficiary group of Fadama III project in the area. However the difference income between the two groups is statistically insignificant. Thus, Fadama III Project has not yet effected on the income of beneficial broiler farmers in the area. Delay in disbursement of fund and inadequate funding support were major constraints to the effective implementation of fadama III in the area. Counterpart funding from the state government should be made available in good time to facilitate early and adequate disbursement. Ownership spirit should be instilled in the fadama user groups by laying more emphasis on farmers' participation in enterprise management to ensure better resource utilization.

REFERENCES

- Agwu, A. E. & Abah, H. O. (2009). Attitude of Farmers towards Cost Sharing in the Second National Fadama Development Project (NFDP-II): The Case of Kogi State of Nigeria. *Journal of Agricultural Extension*, 13(2): 92–106.
- Ayanwale, A. B. & Alimi, T. (2004). The impact of National Fadama Facility in Alleviating Rural Poverty and Enhancing Agricultural Development in South western Nigeria. *J. Soc. Sci* 9(3):157–161
- Chima, I.E and Nwachukwu, I.N. (2007). Impact of selected Rural Development Programme on Poverty Alleviation in Ikwuano L.G.A, Abia State, Nigeria. *African Journal of Food, Agriculture, Nutrition and Development*, Kenya, 7(5): 1–17.
- Food & Agricultural Organization (FAO) (2007). FAOSTAT Statistic database: Agricultural production and production indices data. <http://apps.fao.org>. Accessed 20th Oct. 2011.
- Howard, K. A. & Moore, T. G. (2002). Domestic animal behavior. 4th ed. Ames. 1A: Blackwell publishing professionals, pp. 5–15.
- Ibrahim, H. Y. & Onuk, E. G. (2010). The Impact of Root and Tuber Expansion Programme (RTEP) On Root and Tuber Crops Production In Nasarawa State, Nigeria. *Production Agriculture and Technology journal*, 6(2): 26–34.
- Kudi, T. M., Usman, I., Akpoko, J. G. & Banta, L. A. (2008). Analysis of the Impact of National Fadama Development Project II (NFDP II) in Alleviating Poverty among Farmers in Giwa Local Government Area, Kaduna State, Nigeria. *Ozean Journal of Applied Sciences*, 1(1): 9–15.
- Nasarawa State Ministry of Information (2006). Briefs on Nasarawa State.
- National Population Commission (NPC) (2006). Details of the breakdown of Nasarawa State provisional 2006 Local Government Census results.
- Oluyemi, J. & Roberts, F. A. (2000). Poultry production in warm climates, 2nded. Spectrum Books Limited, Ibadan Nigeria. 2nd Edition, pp.143–168
- Project Coordinating Unit–National Fadama Development Office (PCU–NFDO) (2005). Poverty Reduction and Increased Productivity Through Empowerment, Fadama Development Project. National Fadama Office. Federal Ministry of Agriculture and Rural Development. Abuja, Nigeria.
- World Bank (2003). Project Appraisal Document on Proposal Credit to the Federal Republic of Nigeria for the National Fadama Development Project. In: A. E. Agwu and H. O. Abah (Ed.) Attitude of Farmers towards Cost–Sharing in the Second National Fadama Development Project (NFDP–II): The Case of Kogi State of Nigeria. *Journal of Agricultural Extension*, 2009, 13(2): 92–106.