ANALYSIS OF PROFITABILITY IN CATFISH PRODUCTION A CASE STUDY OF LOKOJA LGA KOGI STATE

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ABSTRACT

This study examined the profitability of catfish farming in lokoja local government area of Kogi State, Nigeria. A multi-stage random sampling procedure was used to collect primary data for the study. The first stage involved a purposive selection of lokoja local government areas based on predominance of catfish production. The second stage involved a random selection of 4 villages. The final stage involved the random selection of catfish-producing households from the villages selected. Data were analysed using descriptive statistics and gross margin analysis. The result of the analysis shows that the mean age of the respondents was 38 years; the majority of the farmers do not have formal education. The mean household size was 6, farming experience had the mean of 5 years and mean for the amount of credit obtained was ₦6000. The average rate of returns on investment (return per naira invested) was 1.91, indicating that for every ₦1 invested in catfish production in the study area; a profit of 91 kobo was made. Thus, it could be concluded that catfish production in the study area though on a small scale, was economically viable.

INTRODUCTION

Aquaculture refers to the cultivation of aquatic organisms under controlled or semi-controlled conditions for economic and social benefits. Aquaculture has been the world's fastest growing food production system over the past decade (Fourier, 2006). In Nigeria, fishery in the agricultural sector is important (Kudi *et al*., 2008). It serves as a source of income and job creation for a good number of people, most especially in the rural areas where agriculture is their major source of livelihood. Also, fish is a source of protein, minerals and vitamins in the diet of Nigerians (Kingdom and Alfred-Ockiya, 2009). Despite the importance of fish in the diet of Nigerians, supply is far below that required to meet the dietary needs of the teeming populace, thereby exposing them to dangers of malnutrition and other resulting health implications (Oyakhilomen and Zibah, 2013). This shortage in supply is seen in the importation and consumption rates of animal protein in Nigeria. Animal protein consumption is 8grams per caput per day (Ugwumba, and Chukwuji, 2010), a far cry from the Food and Agriculture Organization (FAO, 1991), minimum recommendation of 35 grams of animal protein per caput per day for sustainable growth and development, The raising of fish in Nigeria cuts across both the extensive and intensive system of farming and the rearing of different species. However, catfish is among the most commonly cultured species of fish (Issa *et al*., 2014). Catfish commands very good commercial value in the market (Ugwumba, 2011).

Materials and Methods

The study was conducted in Lokoja Local Government Areas of Kogi State of Nigeria. Kogi State is located between latitudes 60 33'and 80 44'North and longitudes 50 22' and 70 49' East of the Equator (Kogi State Government, 2007). The state has a total population of about 3,278,000, with an average of about 228,964 farm families (NPC, 2007). Based on 3.2 percent annual growth rate, the projected population of Kogi State as at 2019 was 4,417,000. About 70% of the people live in rural areas and are engaged in agricultural production. The average farm family is made up of 7 people, with an average farm size of about 2 hectares per farmer (Kogi State Government, 2007).

The two largest rivers in Nigeria (Niger and Benue) flow through the state with all their tributaries. In addition to farming as the major occupation, some of the citizens are civil servants while others are engaged in buying and selling of goods and services.

A multi-stage sampling technique was used for the selection of respondents. The first stage was purposive selection of Lokoja Local Government Areas in Kogi State, based on the predominance catfish production in the area. Secondly, four villages were randomly selected from the Local Government Areas, Thirdly, random sampling method was used to select ten percent of the catfish farmers from the villages through the use of random numbers from the list of the sample frame.

For this study, only primary data were used. The primary data were collected for the 2018 season with the aid of structured questionnaire. The information collected includes:

The socio-economic characteristics of the respondents such as age, catfish farming experience, household size, educational level, extension contact, amount of credit obtained and membership of farmers' group/associationsnand the cost(Naira) of inputs; output of cat fish (Kilogramme) and the sales (Naira), and the constraints associated with catfish production in the study area.

The analytical tools that were used to achieve the objectives of this study include descriptive statistics and gross margin analysis.

RESULTS AND DISCUSSION

RETURNS TO INVESTMENT IN CATFISH PRODUCTION

Results presented in Table indicate that the total revenue (TR) was ₦63,354.08 while the total variable cost (TVC) was ₦33,155. The gross margin was therefore ₦30,199.08. The average rate of returns on investment (return per naira invested) was 1.91, indicating that for every ₦1 invested in catfish production in the study area; a profit of 91 kobo was made. Thus, it could be concluded that catfish production in the study area though on a small scale, was economically viable.

Average costs and returns of catfish production

Variables	Values (₦)	% Contribution
A. Variable cost		
i fingerlings (kg)	3,020	9.1
ii feeds (kg)	9,047	27.3
iii labour (man-days)	19,344	58.3
iv agrochemical (litres)	1,744	5.3
B. Total variable cost	33,155	100
C. Total Revenue	63,354.08	
D. Gross Margin (C -B)	30,199.08	
F Return per Naira Invested (C/B)	1.91	

CONCLUSION

Based on the findings of this study, it could be concluded that catfish production in the study area was profitable by returning 91 kobo to every ₦1.00 spent.

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