



# TOWARDS BOOSTING AQUACULTURE PRODUCTION: AN IDENTIFICATION OF KEY DETERMINANTS OF CATFISH (*Clarias gariepinus*) CONSUMPTION IN IBADAN METROPOLOIS OF OYO STATE, NIGERIA

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## Introduction

The Food and Agriculture Organization (1994), asserted that fish contributes about 60% of the world's supply of protein and that 60% of the developing world derives more than 30% of their annual protein from fish. In Nigeria, fish production is from both internal and external sources; of the internal source, aquaculture is the second most important after artisanal fisheries and supplied between 5 -13.8% of total domestic fish production between 2000 - 2007. The Federal Department of Fisheries (FDF) 2007, estimates available land for aquaculture development as 1.7million hectares of which only 60,000 hectare is utilized. Of the estimated aquaculture production potential of 2.5million tons only 85,087 tons was produced in 2007. In order to boost aquaculture production, it becomes pertinent to investigate the key factor that affects the consumption of catfish (the most cultured fish specie) among different socio-economic and income strata in Ibadan metropolis of Oyo State, Nigeria.

## Materials and methods

The study was undertaken in Ibadan South West local government area (LGA) of Oyo state. The study utilized stratified random sampling to obtain information from 40 households in each of the 3 selected residential locations. Based on the existing infrastructural facilities in the study area, Apata, Challenge and Oluyole were identified as low, medium and high income strata, respectively. Questionnaire and personal interviews were thereafter used to obtain information from 20 respondents but only 110 questionnaires were fit for analysis. Furthermore, the logit model was used to identify factors that affect the consumption of catfish. The probability of a household consuming catfish can be estimated from the

## Conclusion

The research output suggests a wide acceptability of fish and catfish as sources of protein. Relevant stakeholders therefore need to explore all that is required to increase the present level of catfish production. We recommend improved extension services to existing farmers to enable them benefit from information on procurement of inputs and technical information on catfish production. Government fisheries department should help with pond construction at subsidized rates so as to minimize the cost of entry into the industry.

## References

FAO (1994); (Food and Agriculture Organization of the United Nations). *Review of the State of the World Fishery Resources; Marine Fisheries*. FAO Fishery Circular No. 920 Rome.  
Federal Department of Fisheries (2007) Fisheries Statistics of Nigeria, Fourth Edition 1995 - 2007, pp 49.

average value of zi of the logit model.

$$Z_i = \ln P_i / (1 - P_i) = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n$$

The dependent binary variable (Y) is 1 if a household consumes catfish and 0 if otherwise,  $X_1$  is age of household head in years,  $X_2$  is sex (1 if household head is male and 2 if household head is female),  $X_3$  is household size,  $X_4$  is average monthly income in Naira (N),  $X_5$  is average monthly expenditure on food (N),  $X_6$  is total monthly expenditure on other fish types (N),  $X_7$  is total monthly expenditure on other types of proteins (N) and  $X_8$  is total monthly expenditure on Catfish (N).

## Results and Discussion

Fifty six percent of those that consume catfish have female headed households, about 39% of catfish consumer are between 20 – 30 years old, 88% had tertiary education and all respondents have formal education, 45% are self employed and 72% have between 1 - 5 persons per household. Also, 39% earn a monthly income below N50,000 and a mean monthly income of N85,000. Seventy percent of the households spend below N20,000 monthly on food and a mean of N21, 322.73. Furthermore, 92% of the household consume between 1 – 5 Kg quantity of catfish and a mean quantity of 2.21Kg monthly. Also, 91% of the total respondents consume different species of fish, while 68% consume only catfish. the coefficients of total monthly expenditure on other types of fish ( $X_6$ ) and total monthly expenditure on other types of non-fish proteins ( $X_7$ ) are significant at both 1% and 5% respectively. That is, these variables have the probability of increasing catfish consumption. The result suggests that fish and other protein types are major components of the respondent's diet in the study area. Also, household would be interested to devote a substantial portion of their budget to catfish purchase.

Table 1: Summary Statistics of Selected Socio economic variables

Variables	Mean	Minimum	Maximum	Standard Deviation
Age (Years)	38.84	21	70	13.79
Household size (Number of persons)	4.43	1	12	2.14
Monthly Income *(N)	93,046.67	10,000.00	370,000.00	84,579.73
Monthly expenditure on food (N)	23,280.00	2,500.00	150,000.00	22,333.66
Monthly quantity of catfish consumed (Kg)	3.24	1	14	2.47
Monthly expenditure on other fish types (N)	4324.00	400	13,000	2916.21
Monthly expenditure on other non proteins (N)	4888	400	13,000.00	2916.21

N151= \$1 Official exchange rate



Table 2: Logit regression result

Variable	Coefficient	Standard error	T- Value
TMEF ( $X_6$ )	1.551***	0.499	3.105
TMEP ( $X_7$ )	0.003**	0.139	2.264
Log likelihood	-47.554		
Chi square	42.499*		



Figure 1. Dried catfish



Figure 2. Fresh catfish

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