

SOCIO-ECONOMIC CHARACTERISTICS OF FISH FARMERS AND FINGERLING PROCUREMENT IN IBI LOCAL GOVERNMENT, TARABA STATE, NIGERIA

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ABSTRACT

The study investigated the socio-economic characteristics of fish farmers and fingerlings procurement among catfish farmers in Ibi Local Government Area, Taraba State, Nigeria. A multi-stage random sampling technique was used for data collection in the study area thorough structured questionnaire and scheduled interview. The first stage involved random selection of five districts (Sarkin Kudu, Dampar, Nwoyo and Ibi), second stage involved random selection of fifty (50) catfish farmers from each District with a sample size of 200 respondents. Descriptive statistical analysis was used (mean, frequency counts, percentages and charts). The results indicated that male (79%) were majority of the respondents (79.0%), 66.0% were married, 37% between 21-25 years, only 45.0% had Secondary School Certificate Education, house hold size 5 – 9 (39%), weekly income of ₦21,000 - ₦25,000, (41%) and 67% were members of fish farmers' association. Only 39% obtained fingerlings from fish farmers who have fish hatchery while 34% sourced fingerlings from the wild. There is a significant association between the socio-economic characteristics and fingerling procurement of fish farmers $p < 0.05$. Fish farming is dominated by male and married individuals who belong to their professional group. The study recommended that sourcing fingerlings from the wild should be discouraged to have a regular supply since climatic factors could adversely affect breeding in the wild and cause shortage of fingerlings.

Keywords: Socio-economic, Farming, Fingerling, Income, Procurement

INTRODUCTION

Globally, fish farming is considered an important agricultural activity that is capable of ending nutritional deficiencies of the world and contributing to poverty reduction. It meets the food security needs of millions of people in developing countries who will benefit from it as it is a source of relatively inexpensive protein (Kaleem and Abudou-Fadel, 2020). In Nigeria, agriculture provides between 80 to 90 percent of the country's food needs (National Bureau of Statistics (NBS, 2021). It, however, has diverse aspects and this includes fish farming which involves the rearing of fish for the purpose of consumption or sale. Fish is known to be the principal source of animal protein for over one billion people globally and provides many important nutritional and health benefits (Iruo *et al.*, 2020). Fish farming is forecast to increase by 62% between 2010 and 2030, in order to supply the increasing fish and seafood demand derived from a steadily growing population and changing consumption patterns, providing over two thirds of total fish and shellfish consumed worldwide (Reverter *et al.*, 2021). Fish farming also contributes significantly to the economy of many households, with millions of people relying on aquaculture for a living. In fact, despite some controversy, evidence suggests that aquaculture plays an essential role in global food security and poverty alleviation, which are central to the 2030 United Nation Agenda of Sustainable Development Goals (Pretorius *et al.*, 2021). Fish farming does not only provide an important source of protein and income but can also furnish ecosystem services such as wastewater treatment, bioremediation, habitat restoration and replenishment of wild populations (Reverter *et al.*, 2021). Fish farming all over the world is becoming more and more intensive, this involves manipulation of fish and other farming methods to enhance production efficiency by reducing cost of production and increase yield. The study therefore aimed at investigating the socio-economic characteristics of fish farmers and fish farming methods in Ibi Local Government, Taraba State, Nigeria. Specific objectives are to: (i) examine the socio-economic characteristics of the respondents (ii) investigate fingerling procurement among the fish farmers (iii) identify the association between the socio-economic characteristics and fingerling procurement among the fish farmers

MATERIALS AND METHODS

The Study Area Ibi is one of the 16 LGAs in Taraba State. It covers the total land area of 2,672km² and extends between latitude 8° 19' North of the Equator and 9° 51' East of the Greenwich Meridian (Taraba State Government, 2015). The town is located at the South Bank of the Benue River, opposite the influx of much smaller Shemankar River. Taraba River and the Donga River flows into Benue within the LGA. Ibi LGA has two distinct seasons; rainy season which extend from April -October, and the dry season which last for 5 months extending from November - March. The annual rainfall ranges between 1058mm and 1300mm with the

temperature range of 28^oC – 39^oC. Sampling Procedure and Data Collection A Structured questionnaire were administered on the respondents in the study area. A multistage sampling technique was employed among the randomly selected respondents for the study. The first stage involved random selection of four Districts (Sarkin Kudu, Dampar, Nwoyo and Ibi). The second stage was the random selection of Catfish farmers in four stratified Districts. The third stage involved random selection of fifty (50) Catfish farmers from each District with a total sample size of two hundred (200) Descriptive statistical analysis was used (percentages and chart), Chi-square was used to test the association between the socio-economic characteristics and fingerling procurement among catfish farmers at p<0.05 level of significant level.

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents

Table 1 indicated that male constituted the majority of the respondents (79%) and only few females (21%), less than 20 years (20%), 21-30 years (37%), 12%, 31-40 years (26%). The majority (66%) of the respondents were married, 32% were single, 16% had no formal education, 18% had Primary School Leaving Certificate, 45% had Senior School Certificate (SSCE), 21% had Tertiary Education, household size 1-4 (24 %), 10-14 (28 %), 5-9 (39 %), weekly income less than ₦15,000 (21%), ₦15,000 - ₦20,000 (31%), ₦21,000 - ₦25,000 (41%) and members of fish farmers' association were 37%. Majority of male fish farmers could be attributed to production practices such as pond preparation, harvesting and farm maintenance that are easily done by male, female fish farmers often hire male on their farms for such operations unlike male counterparts that mostly carry out such activities. High proportion of married fish farmers showed high level of responsibilities as greater premium is associated with married individuals in the society. Olaoye *et al.*, (2013) reported that fish farm business is managed by responsible individuals capable of investing resources into the business, reflecting societal values that esteem marriage as a symbol of responsibility. Almost all the fish farmers are below fifty years of age which normally indicates high level of productivity expected of young entrepreneur. Fish farmers with low income sometimes engage in other secondary occupation to augment income and meet financial demands. Ogunremi *et al.*, (2023) reported that fish farmers with more than SSCE and Tertiary Education have more than basic education. This is a good development because manuals on various aspects of fish farming such as feeding, liming, predator control, stocking are written in English language.

Table 1: Socio-economic characteristics of Fish Farmers

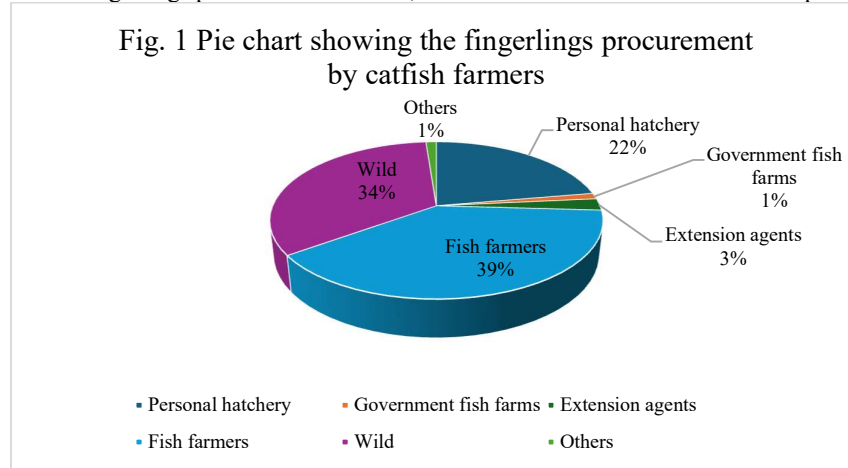
Variables	Percentage	
Gender	Male	79.0
	Female	21.0
Marital status	Single	32.0
	Married	66.0
	Widow/Widower	2.0
Age (years)	< 20 years	5.0
	21-30 years	37.0
	31-40 years	26.0
	41-50 years	17.0
	51 years and above	12.0
Educational level	Informal education	16.0
	Primary school certificate	18.0
	Secondary school cert.	45.0
	Tertiary	21.0
Household size	1-4	24.0
	5-9	39.0
	10-14	28.0
	15 and above	9.0
Membership of fish farmer association	Yes	63.0
	No	37.0
Weekly income from fish farming	< ₦15,000	14.0
	₦15,000-₦20,000	31.0
	₦21,000-₦25,000	41.0
	₦26,000-₦30,000	7.0
	Above ₦31,000	7.0

Source: Field survey, 2024

Fingerlings procurement by the fish farmer

Figure 1 showed fingerlings procurement by catfish farmers. Majority (39%) of the farmers obtained fingerlings from fellow fish farmers who have fish hatcheries, 34% got fingerlings from the wild, 27% have personal hatchery while procurement through extension agents was 3%, government fish farms and other sources 1%

respectively. Aside fingerling sourced from the wild by fish farmers, the tendency of high genetic breed is possible and the history of the parental stock could be traced. Fingerlings from the wild are not reliable because of the seasonality and uncertain traits which include stunted growth, transmission of diseases and in ability to efficiently utilize artificial diet for cultured fish. However, farmers with personal hatcheries is the best because of timely stocking without unnecessary delay due to booking from hatcheries, transportation difficulties and high cost of fingerlings. Usually, there are few numbers of fish hatcheries compared to table size fish farmers which makes fingerlings procurement difficult, farmers with fish hatcheries have comparative advantages.



Field survey 2023

Association between socio-economic characteristics and fingerling procurement among Catfish farmers

Table 2 showed that there is a significant association between socio-economic characteristics of (Gender, age, educational level, primary occupation, farming experience, household size, weekly income (naira) and fingerlings procurement by the Catfish farmer in the study area. The influence of gender was because of the rigor involved in fish farming male are prominent fish farmers compared to female. Age which can be linked with farming experience over the years helped fish farmers to determine the best source of fingerling procurement. Education acquired impacts knowledge through which fish farmers were able to make informed decision because of their educational exposure on fingerling procurement options available to them. Big household size implies more members and invariably ability to source for good fingerlings. Income also helps farmers in fingerling procurement sources because the more the income the better the choice. Hence, gender, age, educational level, primary occupation, fishing experience, household size, and weekly income (naira) influenced fingerling procurement among Catfish farmers in the study.

Table 2: Association between the Socio-economic Characteristics of Catfish Farmers and Fingerlings Procurement

Demographic characteristics	Chi-square value	Contingency co-efficient	Correlation	P-value	Remarks
Gender	6.192	.173	-.176*	.013	Sig.
Age (Years)	34.492	.406	-.374*	.000	Sig.
Marital status	2.723	.116	-.117	.256	Not Sig.
Educational level	22.123	.316	.076	.000	Sig.
Primary occupation	8.905	.206	-.157*	.031	Sig.
Farming experience	34.820	.385	-.055	.000	Sig.
Household size	21.751	.313	-.230*	.000	Sig.
Weekly income (naira)	12.585	.243	.187*	.013	Sig.
Association membership	0.038	.014	-.014	.845	Not Sig.

* Sig. at 0.05 level

CONCLUSION AND RECOMMENDATION

Fish farming is dominated by male and married individuals who belong to their professional group. Fish farms and wild were prominent fingerling sources. The study recommended that sourcing fingerlings from the wild should be discouraged to have a regular supply since climatic factors could adversely affect breeding in the wild

and cause shortage of fingerlings. Extension agents should be encouraged to assist intending fish farmers on procurement of fish fingerlings and also enlighten them on inherent danger of sourcing fingerlings from the wild.

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