

Survey of Commonly Used of Fish Feed in Rivers State Niger Delta Nigeria

¹Dienye, H.E, ¹jamabo N.A, ²Oladosu-Ajayi, R.N

¹University of Port Harcourt, Faculty of Agriculture, Department of Fisheries, PMB 5323, Port Harcourt, Rivers State, Nigeria

²Department of Fisheries Technology, Federal College of Freshwater Fisheries Technology (FCFFT), New Bussa. Niger State, Nigeria

*Corresponding Author: Dienye, H.E, University of Port Harcourt, Faculty of Agriculture, Department of Fisheries, PMB 5323, Port Harcourt, Rivers State, Nigeria.

ABSTRACT

This survey was carried out to determine the market analysis of fish feed in Rivers State in terms of the cost, distributor/retailer network and best quality of fish feed in production. Data were collected with the aid of a structured questionnaire across the three local government areas. The result recorded showed that there is a distributor/retailer network that is well established in Rivers State with the highest percentage in Obio-Akpor L.G.A. Despite the variety in the different brands of fish feed in the market, Coppens fish feed gave the best result followed by vital feed, and then Skrettings in Port Harcourt city L.G.A skrettings feed gave the best result followed by Coppens then Vital feed. The study concluded that the total potential demand for feed is significantly greater than current supply and consumption. We therefore, recommend that investment should be made both by private and public sector to promote activities that will increase the awareness of fish feed suppliers on the market opportunities that exist in Rivers State.

Keywords: Fish feed, Obio-Akpor, Ikwere, Port Harcourt City and distributors

INTRODUCTION

Fish, a very rich source of animal protein, plays an important role in the diet of the people of Nigeria. It provides more than 60% of the total protein intake in adults especially in the rural areas (FAO, 2009). The increasing demand for fish and steady decline in fish production from the wild has caused a spontaneous increase in aquaculture production in Nigeria in recent times (Akinrotimi, Gabriel & Edun, 2010a). Nigeria is among the largest fish consumers in the world with over 1.5 million tonnes of fish consumed annually, yet its domestic fish catch is estimated at 450,000 metric tonnes per year (Ezenwa & Anyanwu, 2003; Jim, 2003). Nigeria is a maritime country where aquaculture plays an important role in the National economy, fish product are important and popular component of the human diet. Nigeria consumes over 1.5 million tons of fish annually (FAO, 2009). According to FDF, (2008), with the estimated population of about 174 million people, the demand for fish stood at 2055 tonnes, supply from aquaculture stood at 671.493 tonnes while deficit increased from 1404.067 in 2014 to 1444.752 tonnes in 2015.

This shows a serious gap between demand and supply of fish. According to Ita, Balogun, Pandogari, Ibitoye. & Sado (1985), Nigeria is blessed with over 12.5 million hectares of water surface which a good percentage could be turned to gold mines if the right feeds could be produced to meet aquaculture and cage culture development. Production of high quality feed is one of the persistent bottlenecks holding back great rapid expansion of aquaculture in Nigeria. Fish farming in Nigeria is an untapped goldmine based on the fact that there is an ever increasing need for it as the best alternative to meet the protein need of the people, however development of aquaculture is completely hindered by inherent problems of developing adequate infrastructural facilities for the production of fish feed with high nutritive value. Although with this major problem notwithstanding, there is still a big market for fish farming and investment in aquaculture in Nigeria. The development of new species' specific diet formulations support the aquaculture (fish farming) industry as it expands to satisfy increasing demand for affordable, safe, high quality fish and seafood production (Craig & Helfrich, 2002). Research and analysis have

Survey of Commonly Used of Fish Feed in Rivers State Niger Delta Nigeria

shown that the single most important input in fish farming is good quality feed, which represents 60-70% of the cost of operations (Jamabo & Dienne, 2017). This has hindered many investors from investing in aquaculture. Among the constraints faced by Aqua feed producers in Nigeria, high cost and scarcity of feed ingredients, particularly the protein source tops the list. In Nigeria, the Aqua feed industry is dominated by few large commercial feed industries usually based in Europe, Asia or America who run local franchised industries.

In spite of the large numbers of fish farmers in the State, with large clusters in Obio-Akpor and Port Harcourt city local government areas, there is minimal production of good quality feed in the State. To address this undesirable situation, there is need to intervene in the feed production and market as a component of its economic growth. Therefore, access to good quality feed which is affordable to small scale fish farmers is

key to catalyzing growth within the Aquaculture in Rivers State.

MATERIALS AND METHODS

Study Area

This study was carried out on the entire Local Government Areas of Obio-Akpor, Ikwerre and Port-Harcourt. Obio-Akpor is a local government area in the metropolis of Port Harcourt, one of the major centres of economic activities in Nigeria, and one of the major cities of the Niger Delta, located in Rivers State. The area is influenced by urbanization or urban sprawl whereby smaller communities have merged together and formed a mega city. Also Port Harcourt city, due to its strategic position in land and sea has become one of the fastest growing cities in Nigeria and the most industrialized in the southern part of the country. Due to this advantaged position, this urban city is becoming congested and expanding rapidly.

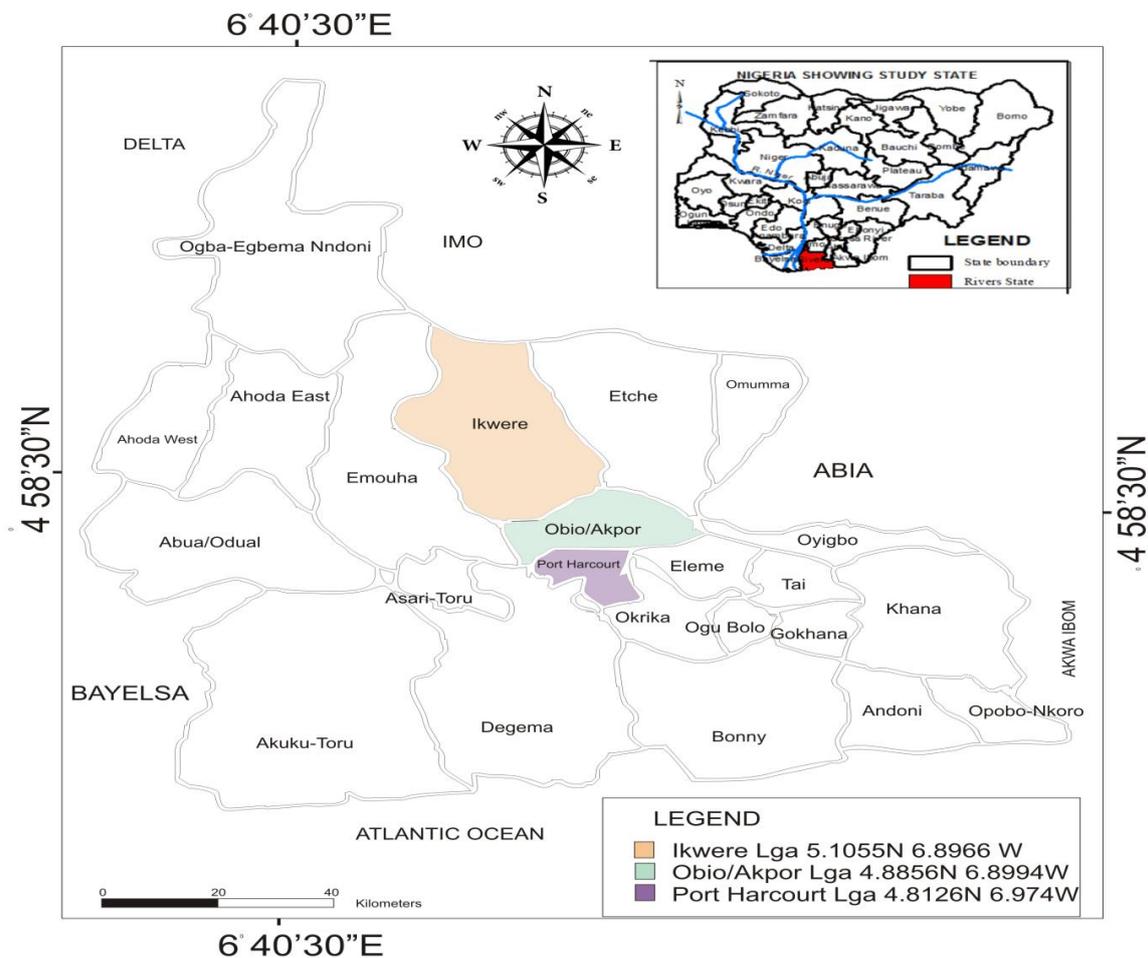


Figure 1: Map the study area

METHODOLOGY

A Survey instrument (questionnaire), was designed to capture the details with different

sections, the time duration for administering the questionnaire was one month each in each

Survey of Commonly Used of Fish Feed in Rivers State Niger Delta Nigeria

LGAs and number of respondents for each LGAs was hundred and fifty each.

DATA COLLECTION ANALYSIS

The survey was limited to fish feed shops in Obio-Akpor, Ikwerre and Port Harcourt city Local Government areas of Rivers State. The method used was the administration of questionnaires to the owners of fish feed shops. Personal visits were made to each shop for the

RESULTS

Table 1. Duration In Business For Fish Feed Distributors

	OBIO-AKPOR (%)	IKWERRE (%)	PORTHARCOURT(%)
1-3 YEARS	67.9	47.9	30.4
3-5 YEARS	10.5	21.1	26.1
5YEARS ABOVE	31.6	21.1	43.5

The table 1 above shows the number of years these distributors have been in the business of selling fish feed in the L.G.As. Portharcourt city recorded 43.5% for over five years and above with the least years in Ikwerre (47.9%). This could be due to the nature and the extent of development in these LGAs as Ikwerre LGA is just developing but has higher of numbers of distributors

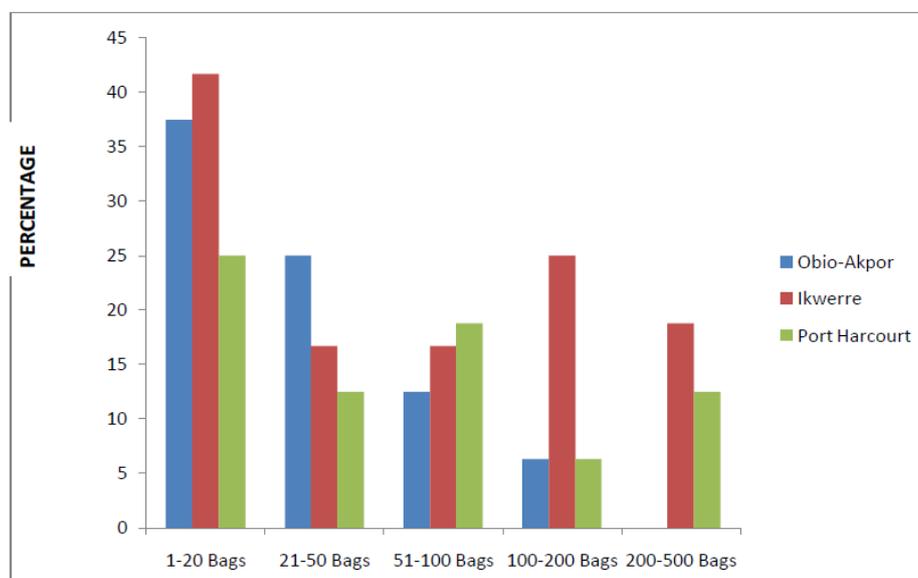


Figure 2: Showing the quantity of fish feed distributors bought in the three LGAs

The figure above shows that in Ikwerre LGA 41.7% of the sub-distributor buys between 1-20 bags as compared to Obio-Akpor and Port Harcourt while Port Harcourt city distributors buys between 200-500 bags with 18.8%. This shows that smaller distributors are resident more in Ikwerre L.G.A while sub-major distributors are resident in Obio-Akpor L.G.A .

The Table 2 below explains how price is determined in the three L.A.Gs 100% pricing is

Table 2. Price Determination Of Fish Feed

L.G.A	NEGOTIATION	FIXED	ASSOCIATION
OBIO-AKPOR	100	-	-

purpose of collecting accurate data for the study. Deductive method was used to get information from the sales persons through personal interview with them. The questionnaire requested information on the brands of fish feed sold, sizes and the prices. The quantity of feed sold daily, weekly and monthly was recorded. Data collected from the field were analyzed using a computer software package (SPSS).

based on negotiation in Obio-Akpor L.G.A while in Ikwerre L.G.A 42.9% is based on negotiation while 57.1% is based on price fixing from the major distributors. For Port Harcourt L.G.A 66.7% is based on negotiation while 16.7% is based on price fixing but relevant associations also has an effect on pricing in this L.G.A with 16.7%

Survey of Commonly Used of Fish Feed in Rivers State Niger Delta Nigeria

OBIO-AKPOR	42.9	57.1	-
PORT HARCOURT	66.7	16.7	-

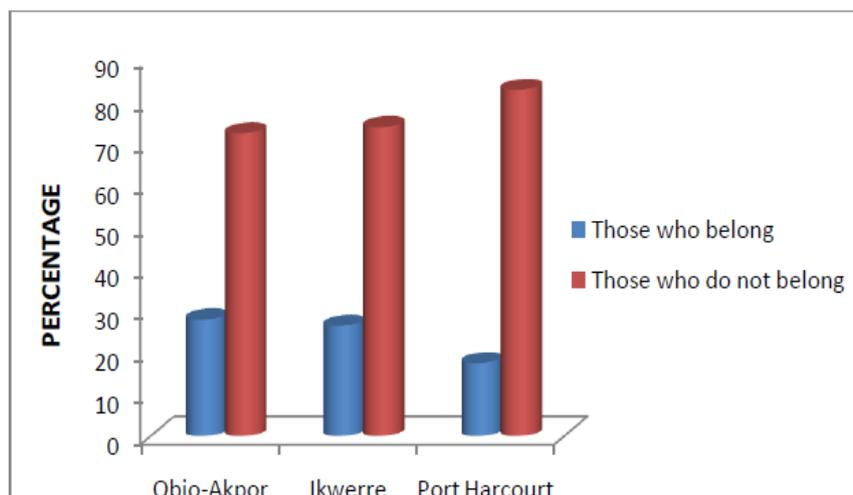


Figure 3. Distributors who belong to Association in the three LGAs

The figure 3 above shows the percentage of the distributors in the three L.G.As who belong to different association, In Obio-Akpor 72.2% of the distribution and retailers don't belong to any association while 28% of them belong to one or two associations. Ikwerre L.G.A 73.7% does not belong to any association while 26.3% of the

distributors' do. Port Harcourt L.G.A recorded the highest number of distributors who does not belong to association. This implies that the association is not well established and strong in Port Harcourt L.G.A as compared to the other two L.G.As

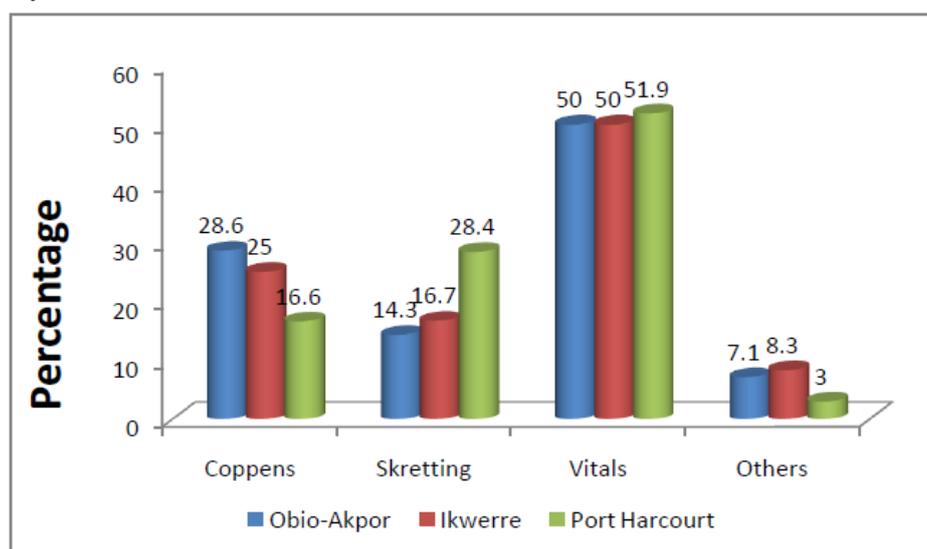


Figure4. Fish Feed Brand with High Demand

The figure above shows the chart for the demand of fish feed by customers in the three L.G.As For fish feed in Obio-Akpor L.G.A Vital feed recorded the highest with 50% followed by Coppens (28.6%). Skrettings recorded 14.3% while other brands had 7.1%. Ikwerre L.G.A, Vital recorded 50%, followed by Coppens feed 25%, Skretting had 16.7% with 8.3% for other feed type. Port Harcourt L.G.A had 51.9% for vital feed followed by Skrettings feed while

Coppens had 16.6%. The interpretation above showed that for fish feed; Vital is of a higher demand than any other fish feed.

FARMERS IN THREE LOCAL GOVERNMENT AREA OF RIVERS STATE

The table 3 below shows the percentage of the farmer in the three L.G.As there were more fish farmers recorded in Ikwerre L.G.A followed by

Survey of Commonly Used of Fish Feed in Rivers State Niger Delta Nigeria

the Port Harcourt city L.G.A while Obio-Akpor recorded the least percentage of fish farmers.

Table 3. Percentage Of Farmers In The Three Local Government Areas Of Rivers State

L.G.A	FISH (%)
OBIO-AKPOR	38.9
IKWERRE	42.9
PORTHARCOURT	42.3

The Figure 4 below shows the years of experience of the fish farmers in the three L.G.As, between 1-2 years 'experience Ikwerre L.G.A recorded the highest with 41.2% followed by Obio-Akpor while Port Harcourt city had the lowest with 18.2%. For 3-5 years' experience Obio-Akpor L.G.A had the highest with 41.7% followed by Port Harcourt city while Ikwerre recorded the least with 17.6%. The farmers who had experience of 5 years above was recorded in Ikwerre L.G.A with 41.2% followed by Obio-Akpor L.G.A while Port Harcourt city has the lowest

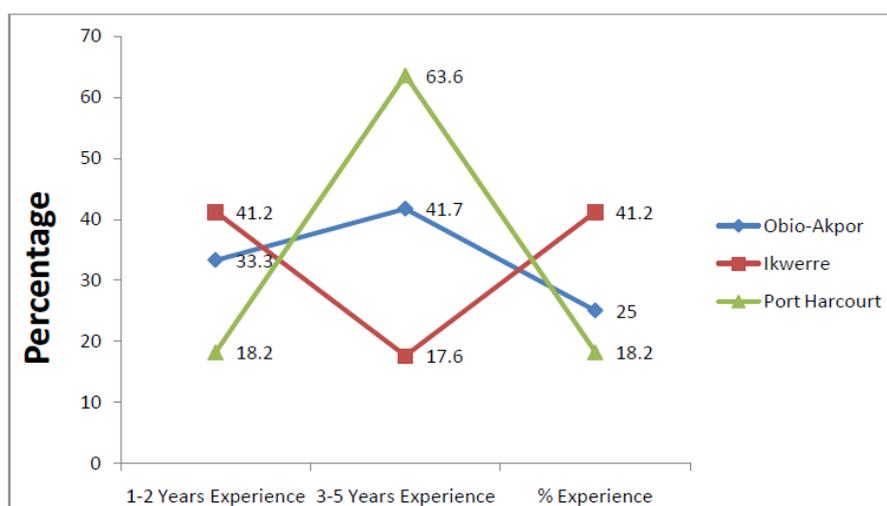


Figure 5. Years of experience of fish farmers

Table 4: Willingness Of Farmers To Try New Fish Feed

	FISH FEED		
	YES (%)	NO (%)	NOT SURE (%)
OBIO-AKPOR	65.2	20.0	14.0
IKWERRE	57.1	57.1	28.6
PORTHARCOURT	83.3	16.7	-

Table 4 above shows the willingness of the fish farmers to try new feed when it is available, for fish feed 83.35% of the Port Harcourt city L.G.A showed interest and willingness to try new feed but Ikwerre L.G.A showed the least

interest in trying a new feed and the reason is that they have tried other new feed in the market and has not given them the expected result as compared to the existing feed in the market.

Table 5: Brand Of Fish Feed With Best Result

L.G.A	COPPENS	SKRETTING	VITAL	OTHERS
OBIO-AKPOR	35.7	21.4	28.6	7.1
IKWERRE	33.3	14.8	40.7	3.7
PORTHARCOURT	23.5	52.9	11.8	5.9

Despite the variety in the different brands of fish feed in the market some of them gave better results than others, this is shown in the table 5 above based on the findings of the farmers. In Obio-Akpor Coppens fish feed gave the best result, followed by Vital feed, then Skrettings

while in Ikwerre L.G.A Vital gave the best result followed by Coppens feed then Skrettings this could be due to fact that they didn't really use Coppens feed because of the high cost as compared to a cheaper one (Vital). In Port

Harcourt city L.G.A skrettings feed gave the best result followed by Coppens then Vital feed

DISCUSSION

There is a common practice of many fish farmers who believe that the imported feeds are high quality fish meal feeds with a complete nutritional profile for meeting the nutritional requirement of fish and that it will give the specially young and vulnerable fingerlings a healthy start. (Hardy & Tacon, 2002). Commercial fish feeds are widely used to get more aqua cultural production, Protein is the major growth promoting factor in feed. The protein requirement of commercial fish are influenced by various factors such as commercial fish size, water temperature, feeding rate, availability and quality of natural foods and overall digestible energy content of diet (Satoh, 2000; Wilson, 2000). The result of this study showed that Vital feed has the highest demand followed by Coppens which is in agreement with the report of (Jamabo & Dienye, 2017) that Coppens feed, is the second most widely used brand of fish feed. The main reason for the wide usage of this brand is the perceived quality of the feed which is also in accordance with the result of this study. It is mostly used in the starter phase – all farmers use imported feeds as starter but Vital gave best result after the starter stage feed then skrettings This could be due to the cost of purchasing Vital feed is much cheaper than the others. The fish farmers in the three local government area bought fish feed from different sources, however, the most common sources were retailers and major dealers within the state, so farmers have ready access to commercial sources? Some of farmers were able to source commercial feed within 5 km of their ponds. A larger percentage of the farmers considered the price of the fish feed brand, quality and availability as the major factors in determining their choice of fish feed while others considered only quality.

According to PIND (2007) in Delta state, all farmers buy manufactured fish feed (2mm) at the starter stages, but as the fingerlings or post-fingerlings increase in age and size, the number of farmers buying manufactured feed decreases. By the 5th and 6th month, only a few buy the feed and significant proportions are substituting imported feed with homemade feed, the idea is to grow out a given fish from fingerling stage to table size with imported feed.

There is a distributor/retailer network that is well established in Rivers State with the highest

percentage in Obio-Akpor L.G.A which mean they are concentrated around this locality. Most of the distributors buy feed directly from the manufacturers while a few of them buy from the representatives of the manufacturers and importers in Nigeria. To make profits, distributors need to sell large amount of feeds as the margin per bag of feeds sold is little, this is in agreement with (PIND 2007) who stated that brands of feeds have distributors in Delta State. Most of the distributors buy feed directly from the manufacturers while a few of them buy from the representatives of the manufacturers in Nigeria. Also, from the result of the study, smaller distributors are resident more in Ikwerre L.G.A while sub-major distributors are resident in Obio-Akpor L.G.A. where, fish farmers bought fish feed from different sources. However, the most common sources were retailers (1-20 bags) and major dealers (200 - 500 bags) within the State. This suggests that farmers prefer to buy from sources close to them to reduce the cost of transportation. The majority of the farmers use less than 5 bags of feed per week. This was because most of them operate on a small scale level. This is because most fish feed distributors are small businesses and they lack the necessary cash flow to buy large quantities of feeds at once. Unless there are major distributors across these three L.G.As, the nearby retailers will continue to be their main source of feed supply even if the price is slightly higher from this source.

CONCLUSION AND RECOMMENDATION

In spite of the large numbers of fish and poultry farmers in the State, with large clusters in Obio-Akpor, Ikwerre and Port Harcourt city local government area, there is less production of good quality feed in the State. This study has shown that the cost of feed for fish farmers in Rivers State is high, The study has concluded that the total potential demand for feed is significantly greater than current supply and consumption, but has also noted that new feed suppliers are entering the market as they have become aware of the steady growth in the demand for fish feed. More Investment should be made to promote activities that will increase the awareness of fish feed suppliers and the market opportunities that exist in Rivers State.

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