



OIL PALM PRODUCTS AND THE SOCIO-ECONOMIC LIVES OF RURAL HOUSEHOLDS IN BENUE STATE

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ABSTRACT

This study was designed to examine the impact of oil palm products on the socio economic lives of Benue state with particular reference to Ogbadibo local government. The primary data used for the study were obtained through the use of structure questionnaires and oral interviews. Descriptive statistics and gross margin analysis were used to achieve the objectives of the study. It was revealed that majority of the farmers obtained their fruits for processing from the village or open market. The study revealed that oil palm processing and marketing is a profitable business in the area. Problems or constraints arose from the enterprise include: fluctuation of prices, lack of rural infrastructures and inputs such as capital and processing machines. The recommendations made by the researcher include: government to supply rural infrastructures, reduce tax rate and the processors and marketers to be encouraged to form cooperative societies so as to access credits.

Keywords: Oil Palm, Socio-economics, Rural Household, Cooperative societies

1. INTRODUCTION

BACKGROUND OF THE STUDY

Oil palm (*Elaeis guineensis*) is one of the most important economic tree crops in Nigeria. The global growing demand for oil is making palm oil cultivation becoming a means of livelihood for many rural families, and indeed the farming culture of millions of people in Nigeria. The oil palm tree is a useful crop that is relevant in all aspect of live with socioeconomic and socio-cultural values (Ogali and Onoja, 2014). Oil palm is a versatile tree crop with almost all parts having economic values and useful for everyday livelihood. The different parts of oil palm include: the fronts, leaves, trunk and roots. These parts give a wide range of products which are of benefit to mankind. These products includes: Palm oil, Palm kernel, Brooms, palm wine etc. The importance of oil palm to the national economy of Nigeria cannot be over emphasized. It ranges from products of food for human consumption, employment, income to farmers and the nation as well as raw materials for industries. Oil palm has been a major source of foreign exchange to Nigeria as well as source of revenue to major segment of the rural population of Benue state in particular and Nigeria in general (Onoja A.O, 2005). One of the most important products of oil palm is the palm fruit, which is processed to obtain three commercial products namely: palm oil, palm kernel oil and palm kernel cake. Palm oil and palm kernel oil are two distinct oils which are important in the world Trade. Hence oil palm is often referred to as a crop of multiple values, which underscores its economic importance (Alabi Michael and Esther 2020). Palm oil is used in the manufacturing of margarine, soap candle, base for lipstick, waxes and polish bases in a condensed form and confectionary (Ogali and Onoja 2014).

Oil palm fruit processing involves harvesting, threshing or bunch quartering, fruit loosening, boiling, digestion, pressing, oil extraction, clarification and packaging/storage. All these stages are done manually except the digestion or pounding of cooked fruits which is done by a diesel engine powered digester equipment. Small scale production involves the use of traditional or Semi-mechanized method for oil extraction from the fresh fruit bunch. In addition, during processing, outdated equipment is mostly used. This method of oil palm processing is arduous, time consuming and oil yield is usually low. Often, about 25% of potential palm oil is lost during processing under small holder palm oil processing in Nigeria depending on the variety of the oil palm (Alabi and Michael and Esther 2020).

Nigerian oil palm processors are classified into mechanized, Semi mechanized and smallholder categories based on the level of processing. Basically, the sector is dominated by smallholder processors accounting for over 80% of Nigeria oil palm industry and using rudimentary equipment for processing (Lawal, Ogbaji and Ocholi 2013). Similarly, the semi-mechanized palm oil processor account for about 16% while the rests are mechanized processors. Generally, smallholder palm oil mills are found in several communities in Benue State of Nigeria with few semi-mechanized and mechanized palm oil mills (Lawal, Ogbaji and Ocholi, 2013).

STATEMENT OF THE PROBLEM

Oil palm, no doubt originated from Nigeria which the country was once a leading producer. The declining productivity and production of oil palm over the years makes it necessary to carry out this study. The share of oil palm contribution to (GNP) has equally suffered a setback.

The small – scale farmers who constitute the bulk of the oil producer seems not be adequately involved. Thus, they continue to rely on wild oil palm groves. Besides, the processing of the

fruits into oil and kernel is still being done by the traditional method which is tedious and low. The palm oil industry mostly has not been made attractive for young school leavers to make a living out of it. This seems to have negative effects at increasing the production of palm produce in the study area (Onoja AO. 2005).

The above scenario is prevailing at a time when local demand for oil palm products are increasing in Nigeria, owing partly to its importance as food for the teeming population and as industrial raw materials for the manufacture of margarine and soap. As a result of these, Nigeria is now a net importer of palm products. Incidentally, the imports are from Malaysia, a country which obtained its first oil palm seeds from Nigeria (NOUN, 2004). This Scenario, which poses a serious concern, informed this study.

AIM OF THE STUDY

The aim of this research is to assess the impact of oil palm products on the socio economic lives of rural households in Benue state in general and Ogbadibo Local government in particular.

OBJECTIVES OF THE STUDY

This paper was designed to among other things, ascertain the level of estimated values of oil products produced and sold in the study area, their profitability and inherent income/problems derivable from oil palm business in Ogbadibo Local government area of Benue State. The study specifically, objects at:

1. Identifying the source of fresh fruit Bunches and other economic palm products in the study area.
2. Estimating the values of oil palm products produced and sold in the study area.
3. Describing the problems encountered by the processors and marketers of oil palm business in the area being studied.

JUSTIFICATION OF THE STUDY

The widespread acceptance of palm oil as cooking oil and industrial oil means higher demand for the product than other oils. Besides, the presence of carotene in palm oil makes it very valuable. Carotene is a precursor for vitamin A, which is very vital for remedy of night blindness (NRDC, 2003). Palm oil is used in the homes as cooking oil. In industries, it is used for the manufacture of margarine, soap, lubricating oils and candles. Palm kernel oil is used as skin lotion or as laxative, when mixed with kerosene, it is used as a wood polish. After extracting the oil, the residue, palm kernel cake form an excellent animal feed. Palm wine obtained by tapping the tree is used as a very good source of alcoholic drink in many social gatherings in Nigeria. Both the oil and wine obtained from oil palm have medicinal value.

Oil palm is a very valuable economic tree crop in Nigeria. It provided large quantity of palm oil and palm kernels, which in the 1960s accounted for 43 percent of the world production. Today, it only accounts for 7 percent of total global output (Ukwuteno S, 2011).

The present monolithic economy as a result of over dependence on crude oil (petroleum) makes it necessary to focus on such economic tree crop like the oil palm. This is because oil palm was one of the export crops that provided the economic foundation of Nigerian economy before and after independence. It is believed that oil palm has the potential capacity if properly developed and nurtured it will boost the economy of Nigeria, Malaysia being a case study (Ukwuteno S, 2011). Besides, the contribution of oil palm to the economy and to the nutrition and health of Nigerians make the study imperative.

2. LITERATURE REVIEW

Oil palm refers to African tree crop in the palm family, cultivated as a source of oil. The palm is grown extensively in West Africa and Malaysia (Alabi, Michael and Esther, 2020)

Ogali and Onoja (2014) see oil palm as a common name for an ornamental and economically valuable palm tree (*Elaeis guineensis*) native of West Africa coast and widespread throughout the tropics. Several studies have been carried out on the role of oil palm industry in various Nigerian societies' economy. Most of these works focus on the importance and mechanics of production of tree crop. The industry is a source of livelihood to a large portion of households in the rural areas of Benue State. The employment opportunities in oil palm processing are numerous ranging from nursery of palm seedlings, plantation farming palm mills and marketing of the final products (Alabi and Esther, 2020).

According to Ogali and Onoja (2014) by the beginning of the 20th century, Nigeria was the largest exporter of palm oil in the world. The relative contribution of palm produce to the country's export continues to decline reaching as low as 13.2% in 2003. Onoja A(2005) sees the oil palm as the most useful economic tree in Ogbadibo Local government Area of Benue state. He enumerated the importance of the crop to include: provision of job opportunities, provision of nutritional values to the people and establishment of wine market which enhance the economic well being of the people. Apex and Christian (2017) see palm wine as the traditional alcohol beverage of the Igbo people and many other societies in the West African sub-region. They are of the view that palm wine which is gotten from palm tree has grown in importance over the years, creating employment opportunities for youths of the land.

Virtually, all parts of oil palm tree are of economic importance and play a vital role in the lives of the people. This is because oil palm acts as the domestic food supplier, an employer of labour, a foreign exchange earner, as industrial raw material and a contributor to gross domestic product (GDP) (Ukwuteno S, 2011)

T.U. Ogali and Onoja A (2014) carried out a research on economic survey of oil palm products in Kogi State. The study was designed to ascertain the importance of oil palm enterprise and the problems associated with oil palm production in Kogi State. The primary data used for the study was obtained through the aid of structured questionnaire. Descriptive statistics were used to analyze the data in order to achieve the objectives of the study. The results revealed that palm oil business is profitable to the people of Kogi State. They recommended that rural infrastructure should be provided and excessive tax should be reduced.

Onoja A .O(2005) studied the impact of palm oil production on rural women in Ogbadibo Local Government of Benue State. The objective of the study was to determine the economic impact of oil palm products on the rural women in the local government. The study used oral interview as well as descriptive statistics to achieve the objective of the study. The result revealed that oil products business impact positively on the lives of Ogbodibo women. The study recommended that social infrastructure should be provided in order to enhance palm oil business in the local government.

Onche and Ameh E. (2018) carried out a study on the role of palm wine in the development of Ogbadibo local Government of Benue state. The objective of the study was to determine the role of palm wine in the development of Ogbadibo local Government of Benue state. The study employed the use of oral interview and structured questionnaire to obtain the necessary data for the study. The result revealed that revenue from palm wine has out spaced palm oil and palm kernel put together. They recommended that (1) improved seedling should be

provided to replace the old and aged palm trees (2) that good road network should be constructed to enable the farmers transport their wine to the market

Alabi, Michael and Esther (2020) studied the involvement of rural households in oil palm fruits post harvest perception of involvement of rural farmers in palm fruits post harvest activities in Ondo state. A two staged sampling procedure to select 120 processors from 3 LGAs were used. Data were collected using structured interview. The results show that majority of the respondents had favourable perception towards involvement in oil palm fruits. The study concluded that respondents had moderate involvement in oil palm fruits and recommended that the government at the grass root should assist in providing modern processing and functional credit facilities

Ukwuteno S. (2011) investigates the economics of small scale oil palm production in Kogi State. The objective of the study was to access the impact of small scale oil palm production on rural farmers in Kogi State. He used structure questionnaire and oral interviews to obtain the necessary data for the study. Simple descriptive statistics and multiple regression analysis were used to achieve the objective of the study. The result revealed that small scale oil palm production contributes positively to the economic development of Kogi state. Apex and Christian (2017) examined the economic importance of oil palm products in Enugu Ezike in Igboeze LGA of Enugu State. The study used oral interview to find out which of the oil palm products contribute most to the economic development of the study area. The result revealed that palm wine contributes 80% to the economic development of the area while 20% was shared amongst palm oil, palm kernel and broom. The study recommended that government should encourage the youths in the taping of palm wine since it brings more revenue to the area than the other products.

While other studies dwell on one aspect of oil palm product or the other; this study investigated the four major products of oil palm and its contributions to the economic development of the local government of which no research work has been carried out before now either in the local government or elsewhere. To the best of the researches knowledge, this research work is new and it is a contribution to knowledge.

METHODOLOGY

Benue State has a total population of 4,253,641 based on the 2006 census, with an average population density of 99 persons per km². This makes Benue the 9th most populous state in Nigeria. However, the distribution of the population across local government areas shows marked duality. There are areas of low population density. such as Guma, Gwer East, Ohimini, Katsina-Ala, Apa, Logo and Agatu, each with less than seventy persons per km²; while Vandeikya, Okpokwu, Ogbadibo, Obi and Gboko have densities ranging from 140 persons to 200 persons per km². Makurdi LGA has over 380 persons per km².

This study was carried out in Ogbadibo LGA. This is because the Local Government falls within the oil palm zone in Nigeria. The Local government has the largest oil palm trees in the state, especially because of its proximity to South Eastern Nigeria. Ogbadibo local government is bounded in the north by Okpokwu local government, Ado in the north east, Kogi state in the west and Enugu state in the east. The local government was created in 1991 with a total population of 128,707 according to 2006 population census. It has an area of 598km with its headquarters at Otukpa. The local government has three districts namely; Orokam, Otukpa and Owukpa.

The population of farmers in Ogbadibo Local Government based on list obtained from Benue Agricultural Development agency is 82,671. A purposive random sampling was used to select the respondents for this survey. The selection was based on the presence of abundant oil palm tree in the local government. The selected districts are OTUKPA, OROKAM and OWUKPA respectively. Twenty farmers were randomly selected from each district giving a total sample size of 60 to form the sampling frame.

Primary data used for the study was obtained through the use of structured questionnaire and oral interviews. The secondary source of data used came from published texts, Journals, periodicals and offline computer resources as Digital video Discs.

Descriptive analysis such as means and percentages as well as gross margin analysis were used to attain the objectives of the study.

Gross margin (GM) is the difference between the gross farm income (GFI) and the total variable Cost (TVC). Thus the model is given by:

$$GM=GFI-TVC.$$

4. RESULTS AND DISCUSSIONS

Table 1: Frequency distribution of sources of palm fruits in the study area.

s/n	sources	Zone			Total	Percentage (%)
		Orokam	Otukpa	Owukpa		
1.	Personal farm	10	9	9	28	42
2.	Purchase from market	10	10	10	30	45
3.	Hiring	8	5	7	19	13

Source: Field survey 2022

Sources of palm fruits: Table 1 above shows the frequency distribution of the sources of palm fruits in the study area. The table indicated that majority of the farmers obtained their palm fruits for processing from markets (45%) which is followed by farmers own farms (42%) and lastly hiring or leasing (13%).

A. **TABLE 2:** Cross Margin Analysis of Oil Palm Business in Ogbadibo Local Government.

S/n	Operational cost	Amount (N)
i.	Harvesting	670, 000
ii.	Transportation	200, 000
iii.	Milling	150, 000
iv.	Pressing	50, 000
v.	Water used for processing	35, 000
vi.	Fuel/wood used (as source of energy)	79, 000
vii.	Tax on revenue	69, 000
viii.	Packaging cost	120, 000
ix.	Handling cost (loading, offloading)	150, 000
x.	Others	50, 000

Total variable cost - N973, 000

B.

1	Products sold (oil palm products)	Income(N)
i.	Palm oil	865, 000
ii.	Palm Wine	1,285, 000
iii.	Palm kernel	695, 700
iv.	Brooms	826, 900
v.	Baskets	575, 800

Total 4,239,800

MFI - 4239, 800

TVC - 973, 000

Gross Margin - B - A

4,239,800

(973,000)

N4, 142500

Sources: Field Survey, 2022-2023

Costs and returns of oil palm enterprise in Ogbadibo Local Government area of Benue State Using Gross Marginal Approach

The table above itemized the cost and returns of oil palm business in Ogbadibo Local Government of Benue State. It indicated that the gross marginal income was N4, 239, 800 from the three districts that make up the Local Government. The total variable cost was N973,000. The difference gave a gross marginal of N4,142,500. This value represents the profit made from oil palm business in the Local Government. The figure also showed that oil palm business is a very profitable business in the Local Government. This point is buttressed by the gross margin ratio of the business, which gave a figure of 4.25, a value greater than one (1). This implies that returns from oil palm business in the Local Government could pay off

the costs of processing and marketing and leaves some extra income which can improve the welfare of the people.

Table 3: Frequency distribution of responses to problems constraining oil palm business in the Local Government

S/n	Item	Frequency Yes	% Yes	Frequency No	% No	Total Frequency	Total %
1.	Low level of education	23	38	37	62	60	100
2.	Lack of capital to set up the business	52	87	8	13	60	100
3.	Lack of electricity	48	80	12	20	60	100
4.	Unstable prices of oil palm products	35	58	25	42	60	100
5.	Lack of inputs	38	63	22	37	60	100
6.	High cost of transportation and machines	19	32	41	68	60	100

Source: Field Survey, 2023

The table 3 above showed that the major problems constraining the effectiveness of production and marketing of oil palm products in the Local Government are as follows:

Lack of capital 87%, Lack of inputs 63%, Lack of Electricity 80%, others are unstable prices of oil palm products 58%, High cost of processing machine 93% and high cost of transportation which is 81%

CONCLUSION

This study was carried out to ascertain economic importance of oil palm business in Ogbadibo Local Government area of Benue State. It was found that the business is viable but still face with some challenges. The major findings of the study are that oil palm business portends a way useful and reliable means of making profits and raising household incomes in the study area. This implies that farmers are encouraged to participate in this business as it will go along way in solving the problem of poverty and looming food crisis not only within the Local Government but the state and the entire nation. The study identified some major constraints that hinder effective oil palm business on the study area. An attempt at solving these problems by the Government at all levels will be away forward in the drive for food security and poverty alleviation.

Based on the findings of this research, it is recommended that government at all levels gear up efforts to provide basic infrastructure such as electricity, good roads, hospital etc in the study area, so that efficiency of production can be enhanced. The government should subsidize inputs especially processing machines for farmers in the Local Government. This will boost their output and reduce cost of production. Farmers should be encouraged to form cooperative societies so that they can benefit from banks loan facilities. This can solve the problem of inadequate capital. Lastly, government should reform the tax policies with a view to make farmers pay taxes that are realistic and friendly.

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APPENDIX I

S/N	Work plan	Duration
1	Literature review	3 months
2	Preliminary	1 month
3	Research design and Field work	5 months
4	Report writing	3 months
	Total	12months

APPENDIX II

COST IMPLICATION OF THE RESEARCH WORK

Cost of traveling to Makurdi to Obtain information from BNARDA (4times)	N20000
Cost of obtaining the following oil palm products as samples for the Study:	
i. 20 Litres Gallon of palm oil	N1500,000
ii. 25 Litres Gallon of Palm wine	N 100,000
iii. Bunches Broom	N50,000,
iv. Bail of palm Kernel	N100,000
Cost of traveling to Ogbadibo LGA agric department several times	N100,000
Cost of visiting Ukwo Otukpa Several times	N100,000
Cost of visiting Ukwo Orokam Several times	N100,000
Cost of visiting Ukwo Owukpa Several times	N100,000
Cost of traveling to various villages in Otukpa to interview oil palm famers (12) villages	N250,000
Cost of traveling to Orokam to interview several farmers (15) villages	N250,000
Cost of traveling to several villages in Owukpa to I interview palm oil famers	N200,000
Feeding and accommodation	N200,000
Cost of collation	N100,000
Cost of typing of results	N100,000
Cost of Communication i.e. Airtime	N50,000