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**ECONOMICS OF TRADITIONAL METHOD OF OIL PALM FRUITS
PROCESSING IN OGBADIBO L.G.A. OF BENUE STATE**

BY

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ABSTRACT

The study was conducted to determine the profitability of traditional method of processing palm fruits in Ogbadibo local government area of Banue State. Data on socio-economic characteristics, costs and returns were obtained from sixty (60) processors in the study area selected using simple random sampling technique. The data were analysed using descriptive statistics and farm budgeting techniques. The results of the study indicated that majority of the respondents were young with mean age of 26 years and average years of processing experience of 8.7 years. The results also showed that labour contributed the major (60.23%) cost component and sales of palm oil is the major (65.5%) revenue component. According to the results, the venture is profitable with returns per naira invested of 0.6. However, high cost of labour and lack of modern processing equipments were found to be the major constraints of the activity as reported by 75% and 58.75% of the respondents respectively. Based on the findings, it can be concluded that while the venture is profitable, more can be desired to improve performance. Thus, the study recommends that processors should form cooperative groups to pool their resources and have easy access to loan so as to obtain modern processing equipments.

INTRODUCTION

Vegetable oil is one of the most important plant products going by the variety of its uses as food items and raw materials for cosmetics and pharmaceuticals industries. It is obtained from plant seeds by processing solvent extraction or by a combination of the two methods. Palm oil is one of the vegetable oils used both for food products and cooking oil (Berger, 1986).in 1980 palm oil became the world second most important vegetable oil after soybean oil. The demand for has increased world wide due to population growth, a rising standards of living as well as change in consumer preference arising partly from health considerations (Wood, 1981). The economic viability of palm tree can be attributed to its less maintenance requirements and longer life span of up to 60 years or more, but usually replaced after 25 – 30 years to maintain optimum yield.

According to Orewa (1998) the bulk of the palm oil consumed in the urban areas is produced in the rural areas in most cases using traditional methods. The efforts of these rural palm fruits processors put Nigeria as world largest exporter of palm oil in 1960. Nowadays, the methods involved in oil extraction include hydraulic hand press, screw press, pioneer mill etc. However, the Nigerian rural extractors have not been wrapped up along by the technological trend, According to Hartley (1977) the estimated efficiency of local method extracted oil to oil in the fruit is about 40- 45%.

The combined efforts of increasing domestic demand and use of inefficient method of oil extraction has made Nigeria to lost world leading exporter of the commodity to

Malaysia (Cornelius ,1983 and Coursey *et al.*, 1984). The need for analysis of traditional method of palm oil extraction with the view of improving the method can therefore be hardly overemphasized.

Objectives of the Study

The main objective of the study is to conduct an economic analysis of the traditional method of palm fruit processing in Ogbadibo local government area of Benue State. The specific objectives include:

- i- To examine the socio-economic characteristics of the respondents.
- ii- To assess the cost and returns of the traditional method of palm oil extraction
- iii- To determine the major constraints associated with oil palm processing in the study area

METHODOLOGY

The Study Area

Ogbadibo local government area is located 250km west of Makurdi the Benue State capital. The local government has its head quarters at Otukpa and shares boundaries with Olamoboro L.G.A. of Kogi state in the north and west, to the east by Udenu L.G.A.of Enugu state and Okpakwu LG.A to the south eastern axis.

The local government has a land mass of 550 square kilometres with a population of about 90,000 people. The area experiences wet season from April to October. August to September records the highest rainfall. Majority of the people in the state are engaged in farming and the major crops grown are maize, yam, cassava groundnuts and millet. The area has the largest oil palm plantation in the state (Ogbadigbo profile 2000).

Data Collection

Structured questionnaire was the instrument used for data collection from the respondents. Respondents were selected from the 6 political wards using simple random sampling technique. A total of ten (10) processors were selected from each ward given a total of sixty (60) respondents.

Data Analysis

The data collected were analysed using descriptive statistics and farm budgeting model. The descriptive statistics used include frequencies and percentages. The farm budgeting model was used to compute costs and returns and consequently profitability of the method.

Net Income (NI) = Total Revenue (TR) – Total Cost (TC)

Return per Naira Invested = Net Income (NI)/Total Cost (TC)

RESULTS AND DISCUSSIONS

Socio-economic Characteristics of the Respondents

Table 1 shows the socio-economic characteristics of the respondents. The distribution depicts that majority of the respondents were young able bodied people as the major (58%) age bracket was found to be 20-29 years having a mean age of 26 years . The table further shows that informal and primary educations were the major educational attainments of the respondents with 40% of them each. Distribution by years of processing experience shows that respondents with 6-10 years experience formed the major (50%) group. The mean processing experience was found to be 8.7 years.

Respondents Source of Capital

Table 2 shows the distribution of respondents based on their source of capital. Overwhelming majority (80%) of the respondents indicated personal savings as their source of capital for the business. This finding agrees with that of Ilechie *et al.* (1986) who disclosed that capital is the major limitation of small scale oil palm processing.

Costs and Returns Analysis

Table 3 shows the costs and returns of oil palm processing. According to the table, variable costs constitute the major costs (94.89%) component with labour alone having 60.23% of the total. Palm oil is the major (65.5%) revenue component. The net income of the business was found to be N46.66/litre and the return per naira invested was found to be 0.60 indicating that the activity is profitable, since for every one naira invested in the business, there are 60 kobo as profit.

Constraints Associated to Traditional Palm Oil Extraction

Table 4 shows the distribution of respondents based on problems faced during oil extraction. According to the result, high cost of labour is the major (75%) problem followed by lack of modern processing equipment with 58.33% of the total respondents.

CONCLUSION AND RECOMMENDATION

Conclusion

Traditional method of palm oil extraction in Ogbadigbo L.G.A. of Benue State is a business dominated by young people with low level of education who use their personal savings as source of capital. The business is profitable though with problem of high cost of labour as a result of lack of modern equipments.

Recommendations

Based on the findings of the study, the following recommendations are hereby made:

- The local authority should embarked on enlightenment campaign for the processors to form cooperative unions
- Soft loans should be provided to the processors particularly in terms of processing equipments to surmount high cost of labour.

- Processors should be encouraged to further their education as that will help them to overcome problems of their business easily.

Table 1: Distribution of Respondents According to Socio-economic Characteristics

| Characteristics | Frequency | Percentage |
|-------------------|-----------|------------|
| Age (years) | - | - |
| Less than 20 | 9 | 15.00 |
| 20-29 | 35 | 58.33 |
| 30-39 | 10 | 16.67 |
| 40-49 | 4 | 6.67 |
| 50 & above | 2 | 3.33 |
| Mean | | |
| Total | 26 | 100 |
| | 60 | |
| Educational Level | | 15.00 |
| Not been to sch. | 9 | 40.00 |
| Primary educ. | 24 | 1.67 |
| Secondary educ. | 1 | 3.33 |
| Tertiary educ. | 2 | 40.00 |
| Adult educ. | 24 | 100 |
| Total | 60 | |
| Experience (yrs) | | 20.00 |
| 1-5 | 12 | 50.00 |
| 6-10 | 30 | 25.00 |
| 11-15 | 15 | 5.00 |
| 16 & above | 3 | |
| Mean | | 100 |
| Total | 8.7 | |
| | 60 | |

Source: Field Survey, 2002

Table 2: Distribution of Respondents According to Source of Capital

| Capital Source | Frequency | Percentage |
|-------------------|-----------|------------|
| Personal savings | 48 | 80.00 |
| Relatives/friends | 12 | 20.00 |
| Money lenders | 2 | 3.33 |
| Banks | 4 | 6.67 |
| Total | 60 | |

Source: Field Survey, 2002

Table 3: Costs and returns of palm oil processing (N/L)

| Item | N/L | Percentage |
|---------------------------|--------------|------------|
| Costs item | | |
| a) Variable cost | | |
| Palm fruit | 20 | 25.53 |
| Threshing | 6.0 | 7.66 |
| Pounding | 28.56 | 36.46 |
| Oil extraction | 8.16 | 10.42 |
| Palm kernel cracking | 4.46 | 5.69 |
| Fire wood | 5.73 | 7.31 |
| Water | 0.57 | 0.73 |
| Transportation | 0.82 | 1.05 |
| Total variable cost | 74.34 | 94.89 |
| Fixed costs | | |
| Depreciation of equipment | 4 | 5.11 |
| Total fixed cost | 4 | 5.11 |
| Total cost | 78.34 | 100 |
| b) Returns | | |
| Sales of palm oil | 80.00 | 64.00 |
| Palm kernel | 45.00 | 36.00 |
| Gross income | 125 | 100 |
| Net income | 47.00 | |
| Return per naira invested | 0.60 | |

Source: Field Survey, 2002

Table 4: Constraints of Palm Fruits Processing

| Constraints | Frequency | Percentage | Rank |
|--------------------|-----------|------------|------|
| High cost of labor | 45 | 75.00 | 1st |
| Lack of proc equi | 35 | 58.33 | 2nd |
| Lack of credit | 10 | 16.67 | 3rd |
| Seasonality | 9 | 15.00 | 4th |
| High cost of inp. | 5 | 8.33 | 5th |
| Poor ext. serv. | 3 | 5.00 | 6th |
| Total | 60 | 100 | |

Source: Field Survey, 2002

References

- Asiedu, J.J. (1992). **Processing of Tropical Crops: A Technological Approach.** Macmillan press Ltd London . 288pp
- Berger, K. (1986). Palm oil products: Why and How to Use Them. *Journal of food Technology* **40**(9). P 72-79
- Cornelius, J.A. (1983). **Processing of oil palm fruits and its products.** Tropical Institute Report 95pp
- Coursey, D., Macfarlane, G.N. and Swetman, A. A. (1984). A comparison of traditional and industrial palm oil. *Oil pam News* **28**: 11-17
- Ilechie, C. O., Orewa, S. I., Inedia, G. and Badmus, G. A. (1986). Overcoming processing problems of small scale oil palm processing. A paper presented at oil palm conference held at Port Harcourt. November, 9-19.
- Orewa, S. I. (1998). Financial evaluation of the NIFOR Small-Scale Palm Oil Processing Equipments *Nigerian Journal of Palms and Oil Seeds*, **14**: 18-85pp.
- Wood, B. J. and Beatite, J.E. (1981). Processing and Marketing of Palm Oil. *Nigerian Food Journal*, **15**: 42.