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PROBLEMS OF OIL PALM PRODUCTION AND PROCESSING AS PERCEIVED BY PALM OIL PROCESSORS/MILLERS IN IMO STATE, NIGERIA

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ABSTRACT: *This study was carried out in Imo State to examine the perceived problems of oil palm production. A total of 124 processors or millers were selected randomly and given questionnaire. Data collected were analyzed using percentage, mean and standard deviation. The findings of the study revealed that the problems facing oil palm production include lack of adequate land space, inadequate storage facilities which results in low production of oil palm, inadequate finance. While its prospects include that the cultivation of oil palm is an inevitable means of shifting the nation's dependence on oil and a means of discouraging urban drift. It was recommended that governments at all levels should provide loans specifically to oil palm producers, cooperative societies should also be encouraged to ensure easy milling of oil palm, adequate market information be given to millers for profitable income and land tenure reform be taken to ease land problems.*

KEYWORDS: Oil Palm, Processing, Production, Milling, Finance, Nigeria

INTRODUCTION

The oil palm (*Elaeis guinensis*) is a perennial monocotyledonous plant which belongs to the family *palmae* (Hartley,1988). The African oil palm *Elaeis guinensis*is is native to West African and South West African occurring between Angola and Gambia. In West Africa, the oil palm grows naturally throughout the rainforest belt. Many plantations of oil palm have and are being established in West African belt, most palm produce is obtained from growing wild (Mathew, 2009). The oil palm is indigenous to Nigeria and has consequently been exploited in its natural grooves and homestead in the country from time immemorial. In Nigeria the two varieties of oil palm grown are identified as Dura and Tenera (Mathew,2009). Dura is the common wild palm found all over Nigeria. The fruit has a thick shell and a large kernel, it gives a low amount of oil and begins to bear fruits 6-7 years after planting. Tenera has a thin shell and small kernel. It produces a high quantity of oil palm. It bears fruit 3-5 years after planting. The oil palm requires abundant rainfall of about 2,000 mm/ annum, well distributed throughout the year (Hartley, 1988). Generally, oil palm can be grown in a wide range of soils, however, they thrive best in a well-drained deep loamy alluvial soil rich in organic matter. The crop does not tolerate highly alkaline, saline, water logged and coastal sandy soils. It tolerates temperate between 29-30 centigrade, humidity of 80 percent is required (Hartley, 1988).

The fruit pulp and nut provide palm oil and kernel respectively, made oil palm a high yielding oil producing crop (Handerson *et al,* 2000, Corley *et al.* 2009). The industry

constitutes significant sector of the Nigeria economy providing food, raw materials for the confectionary, processing and Oleo-chemical industries. As a result of the intensive nature of its cultivation, it produces gainful employment for many Nigerians. At present oil palm production is second to that of soyabean (Glycin max) oil in terms of world vegetable oil production and the demand for oil palm is expected to increase in future (Ho and Tan, 2007, Yuso, 2007, Corley, 2009).

Nigeria production during the late fifties and early sixties accounted for about 39 percent and 40 percent of the world production of palm oil and palm kernel respectively (Usoro 1994, Omoti, 2009). All of the production came mainly from the natural and semi-natural groves and form about 10,073 hectares established plantations and 4,674 hectares of small holder planting in the country (Omoti, 2009). The export of palm oil and palm kernel from Nigeria in recent years have widened significantly due to number of factors including increased domestic consumption, as a result of population growth, slow pace of growth of new plantings and declining exploitation, area and productivity of the groves (Hartley, 1988, Omoti, 2009).

Imo state is one of the oil palm producing area in Nigeria, and is noted as one of the largest producers of palm oil in Nigeria, yet there is no storage of palm oil and kernel in Nigeria not to talk of export which is used to boast the nation revenue when it is falling. It is therefore the concern of the study to identify the reason responsible for the falling of oil palm production in the area and to consider the solution. The major objective of the study is to evaluate the problems and prospect of oil palm production in Imo State. The specific objectives of the study were to:

a. Identify processing methods used by the respondents,

b. Examine perceived problem affecting production/processing of oil palm in the study area.

c. Determine perceived strategies for improving the production/processing of oil palm in the study area.

METHODOLOGY

Imo State lies within latitudes 4°45'N and 7°15'N, and longitude 6°50'E and 7°25'E with an area of around 5,100 Sq. km. It is bordered by Abia State on the East, by the River Niger and Delta State on the west, by Anambra State to the north and Rivers State to the south. Rainy season begins in April and lasts until October with annual rainfall varying from 1,500mm to 2,200mm (60 to 80 inches (IMSG, 2010). An average annual temperature above 20 °C (68.0 °F) creates an annual relative humidity of 75%, with humidity reaching 90% in the rainy season. The dry season experiences two months of Harmattan from late December to late February (IMSG, 2010). The hottest months are between January and March. The estimated population is 5.8 million and the population density varies from 230-1,400 people per square kilometer (NPC, 2006).

The research covers all the oil palm millers/processors in Imo State. This study employed the purposive random sampling techniques in selecting respondents for the study. A list of

registered millers/processors was obtained from miller's cooperatives in Owerri, the Headquarters Office. The list has a total of 1,240 millers and 124 members were selected randomly which gives 10 percent of the population. The instrument that was used in data collection in this study was the questionnaire complimented with oral interview. Data collected were analyzed using descriptive statistical tools like percentage, mean and standard deviation. Objective 1 was analyzed using percentage presented in frequency tables, while Objectives 2 and 3 were analyzed on a 3 point likert - type scale of strongly agreed, agree and disagree, assigned weight of 3, 2 and 1.The scores were added to give 6 divided by 3 to give a mean value of 2.0. Any mean value of 2.0 and above was assigned a problem and strategy for improvement, while mean less than 2.0 was not a problem and or improvement strategy.

RESULTS AND DISCUSSION

Oil palm Processing Methods in the Study Area

Table 1 showed the various methods of processing oil palm and the processes involved in the study area. To produce oil, the respondents used a variety of methods. Majority (90.3%) to process oil by pounding in mortar with a long strong pistle modified for smashing the cooked fruits. They are followed by 83.9% who process by the use of hand press. This method requires a lot of strength, energy and family labour. This method is tedious and time consuming and large quantity is not produced at a time as it takes days to turn out large quantity oil. Again, 43.5% and 32.3% uses hydraulic pressing and direct screw pressing respectively. These two methods are better though expensive to purchase, but when available, are capable of producing large quantities and high-quality palm oil. Other methods include use of leg (59.7%), use of digester/screw pressing (10.5%). On the other hand, three common processes are involved in product processing namely, fermentation (100%) which is done by all the millers/processors, sterilization (62.9%) and clarification (34.7%) which include boiling and sieving of oil for the removal of impurities.

Table 1: Oil Palm Processing Methods

Processing methods	Frequency	Percentage
Use of leg	74	59.7
Pounding	112	90.3
Hand pressing	104	83.9
Direct screw pressing	40	32.3
Hydraulic pressing	54	43.5
Use of digester/screw pressing	13	10.5
Process Involved		
Fermentation	124	100
Sterilization	78	62.9
Clarification / screw of oil	43	34.7

Source: Field survey, 2017.

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Problems of Oil Palm Produce Processing

Table 2 reveals the plenty problems of palm oil produce processing with a disseminating index of 2.0, all sixteen items were accepted as problems of processing oil palm. They include land tenure problems with a mean (M) response of 3.05, high cost of transportation (M=2.5), high cost of milling machine (M=2.4), high cost of labour (M=2.6), poor market price (M=2.3), lack of storage facilities (M=2.5), poor quality of oil palm produce (M=2.8), lack of government support (M=2.1), lack of funds/insufficient funds (M=3.0), labour intensive (M=2.8), poor access to good varieties (M=2.5), long period of maturity (M=2.3), seasonal variation (M=2.1), fluctuation of selling prices (M=2.0), lack of access to credit facilities (M=2.5), and difficulty in harvesting during rainy season (M=2.8). The mean response of the items agrees with the standard deviation scores which are not far from the mean. Therefore, since the deviation scores which are not far, the results are accepted as true.

Table 2: Perceived Problems of Oil Palm Production and Processing

Problem	Mean	SD
Land tenure problems	3.5	0.64
High cost of transportation	2.5	0.66
High cost of milling machine	2.4	0.98
High cost of labour	2.6	0.43
Poor market price	2.3	1.01
Lack of storage facilities	2.5	0.77
Poor quality of oil palm produces	2.8	0.91
Lack of government support	2.1	0.74
Lack of fund/insufficient fund	3.0	0.64
Labour intensive	2.8	0.80
Poor access to good varieties	2.5	0.68
Long period of maturity	2.3	0.54
Seasonal variation	2.1	0.74
Fluctuation of selling prices	2.0	0.84
Lack of access to credit facilities	2.5	0.91
Difficulty of harvesting	2.8	0.64

Source: Field survey, 2017.

Strategies for Improving Oil Palm Produce Processing

Table 3 showed strategies that could improve the production and processing of oil palm in the study area. The strategies were improved access to credit with a mean response of 2.7, availability of processing machine (M=2.8), cheaper transportation cost (M=2.4), better processing equipment (M=2.9), better harvesting techniques (M=2.3), improved marketing channels (M=2.7), provision of farm inputs (M=2.6), cheaper cost of hired labour ((M=2.1), availability of land (M=2.3), access to good road network (M=2.8), improve market network (M=2.7), and provision of adequate storage facilities (M=3.1).

Table 3: Strategies for Improving Oil Palm Produce Processing

Strategy	Mean	SD
Improved access to credit	3.5	0.83
Availability of processing machine	2.5	0.60
Cheaper transport cost	2.4	1.15
Better processing equipment	2.6	1.01
Better harvesting techniques	2.3	0.74
Improved marketing channels	2.5	0.82
Provision of farm inputs	2.8	0.80
Cheaper cost of hired labour	2.1	1.23
Availability of land	3.0	0.64
Access to good road network	2.8	0.77
Improved market networks	2.5	0.84
Provision of storage facilities	2.3	0.58

Source: Field survey, 2017.

CONCLUSION

The processing methods used included use of leg pounding, hand processing, hydraulic press, and direct screw among others. The following problems affect them, land tenure, high cost of transportation, lack of storage facilities, lack of fund/insufficient funds, among many others. To improve upon produce processing, access to credit be improved, better processing technique, better harvesting equipment be supplied. Governments at all levels provide loans specifically to oil palm producers, Cooperative should also be encouraged to ensure easy milling of oil palm, adequate market information be given to millers for profitable income, land tenure reform be taken to ease land problems

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