

## YOUTHS' INVOLVEMENT IN OIL PALM (*ELAEIS GUINEENSIS*) FRUIT PROCESSING ACTIVITIES

Julius Olatunde AYINDE<sup>1,\*</sup>, Michael FAMA KINWA<sup>1</sup>,  
Babatunde Opeyemi AKEREDOLU<sup>1</sup>

\*E-mail: tundejoy@yahoo.com; jayinde@oauife.edu.ng

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**ABSTRACT.** This study assessed the youths' involvement in oil palm fruit processing activities in Ondo State, Nigeria. It described the socio-economic characteristics of youths involved in oil palm fruit processing activities, determined their level of involvement, examined their perception and identified constraints associated with their involvement. Multistage sampling procedure was employed to select 120 respondents from the study area. Interview schedule was employed to collect relevant data, which was analysed with SPSS software package. Descriptive statistics were used to summarise the data while inferential statistics were used to draw inference on hypothesis. The results show that majority (63.3%) were male, 95.8% had formal education with a mean age of  $27.2 \pm 2.7$  years. Picking of fresh fruit bunches ( $\bar{x}=2.71$ ), packaging ( $\bar{x}=2.60$ ) and gathering of bunches ( $\bar{x}=2.50$ ) were the major activities youth involved in. Higher percentage (57.9%) of the youth had favourable perception towards involvement in oil palm fruit processing

activities. Lack of modern processing facilities ( $\bar{x}=3.65$ ) and funds/inadequate credit facilities ( $\bar{x}=3.65$ ) were the prime constraints to their involvement. Number of labour ( $r=0.7460$ ;  $p \leq 0.01$ ) and income ( $r=0.601$ ;  $p \leq 0.01$ ) of the respondents were significantly related to youth involvement. The study concluded that youth had moderate involvement in oil palm processing activities. However, agricultural development stakeholders like government should provide adequate and functional credits facilities to these youths to encourage their involvement.

**Keywords:** constraints; participation; processing; perception, socio-economic.

### INTRODUCTION

Youth constitute the major human resource for agriculture and technology innovation development in every country (Nwachukwu, 2008). They are one of the greatest assets and major catalyst for change that any nation can mobilize for its national

<sup>1</sup> Department of Agricultural Extension and Rural Development, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria

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development through participation in agriculture (Valerie, 2009). According to National Population Commission (NPC, 2013), Nigerian youth was estimated to be almost half of her population and escapulates youth as individuals between 15 and 35 years of age. Bahaman *et al.* (2010) and Alao *et al.* (2014) refers to youth as men and women that are young with the abundance of energy and strength both mentally and physically. They possess both positive and negative attributes, which predominantly distinguish them from the adults. They are the most exuberant, the sharpest in memory, the most talented, the most innovative and the healthiest in most societies (Alabi and Famakinwa, 2016). Yet, they remain the bedrock on which every nation's development thrives. According to Aphunu and Atoma (2010), cited in Thomas and Eforuoku (2016), noted that the farming population in Nigeria is aging and is becoming practically impossible for this aged generation dominating agricultural sector to deliver the expected productivity that will meet the food needs of the ever-growing population.

Oil palm (*Elaeis guineensis*) is a common cash crop cultivated by farmers in Nigeria; the crop is important because it has been proved that it could serves as a means of livelihood for many rural families. It originated from West Africa within the tropical rainforest and it is indigenous to the Nigerian coastal plains (Eze *et al.*, 2014; Olagunju, 2008). It is a versatile tree crop with

almost all parts of the tree being useful and of economic value. Its essential components are used for household and industrial purposes include the fruits, fronds, leaves, trunk and roots. One major way of obtaining the economic values of oil palm is processing the palm fruits to palm oil and other products, which include palm kernel oil, palm wine, palm kernel cake and broom (Akangbe *et al.*, 2011). Nwalieji and Ojike (2018) opined that the production and processing of oil palm constitute very important sources of income and employment to many rural dwellers.

According to Olagunju (2008), several million smallholders are spread over an estimated area of 1.67 million hectares in the southern part of Nigeria, with about 80% of production coming from dispersed smallholders farmers (<https://www.modishproject.com/assessment-women-palm-processing/>). Small-scale oil palm processing is predominant among processors in Nigeria, which is mainly through traditional methods (Olagunju, 2008). Although palm fruit produces palm oil and palm kernel oil as the two distinct oils, which are important in World Trade (Alabi *et al.*, 2020, USDA, 2000), palm oil is the most useful and important product, which is used in the production of soaps and other detergents, while palm kernel oil, which is extracted from the nut, is also useful in the manufacture of margarine and oil-based confectioneries (Alabi *et al.*, 2020; Koledoye and Deji, 2015).

Nigeria was the world largest producers and exporters of palm oil in the early 1900s to the 1960s, accounting for more than 40% of global output and 82% of its export earnings (Alabi *et al.*, 2020). By the end of the twentieth century, Nigeria has lost her position to Malaysia, which is now largest producer of palm oil in the world, but at present Nigerian palm oil harvest had reduced to about 7% of the world production due to over-reliance on traditional method of production and processing (which results into low quantity and poor quality oil), and the discovery of crude oil in a commercial quantity among others (Alabi *et al.*, 2020; Akangbe *et al.*, 2011). Nwalieji and Ojike (2018) also stated that Nigeria did not only stop exporting palm oil, but also became a net importer of palm oil even from Malaysia that took the seedlings from her. According to Nwalieji and Ojike (2018), the growth in oil palm has stagnated at 930,000 MT since 2013, while the consumption of palm oil in Nigeria amounts to 2.0 million MT per annum and the shortage in oil palm industry is estimated to be around 1,070,000 MT annually. This creates a very serious challenge not just for the manufacturing sector that uses it as input, but also human consumption.

Alabi *et al.* (2020) also identified harvesting, threshing, fruit loosening, boiling, digestion, pressing/oil extraction, clarification and packaging/storage as major oil palm fruit processing activities, which are done manually, except the digestion

or pounding of cooked fruits, which is either done mechanically or using electrical digester equipment. Among the small- scale producers, traditional or semi-mechanized methods are also used for oil extraction from the fresh fruit bunch (Olagunju, 2008).

Based on the dwindling trend in oil palm production and processing in Nigeria, despite its contribution to the economy, coupled with aging rural farming population in Nigeria, it is becoming imperative to integrate youths into agricultural activities, especially oil palm fruit processing by providing incentives, such as access to credit, capacity building and provision of new technology cum processing facilities. This is because youth, apart from being mentally active citizens and capable of revitalising the sector, their participation in the sector is also important for increasing skills, knowledge, confidence, self-reliance and opportunity to collaborate and engage in sustainable agricultural development.

Several studies (Alabi *et al.*, 2020, Nwalieji and Ojike, 2018, Adesiji *et al.*, 2016) focused on in oil palm processing among farmers and processors, while studies conducted by Thomas and Eforuoku (2016), Adisa *et al.* (2017) and Akpan *et al.* (2015) centred on youth participation in agricultural production activities. However, there is dearth of information on rural youth involvement in oil palm fruits processing activities in Nigeria, especially in the study area. Hence,

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this study sought to assess the involvement of youths in oil palm fruit processing activities in Ondo State, Nigeria: it specifically described the socio-economic characteristics of youths involved in oil palm fruit processing activities; determined their level of involvement; examined their perception and identified constraints associated with their involvement. One hypothesis stated in null form as there is no significant relationship between socio-economic characteristics and youth involvement in oil palm fruit processing activities was tested in the study.

### **Theoretical framework**

Theoretical proposition for the study was deeply rooted in rational choice theory developed by James S. Coleman in 1990, which its basic principles are derived from neoclassical economics (as well as utilitarianism and game theory (Levi *et al.*, 1990; Lindenberg, 2001; Simpson, 2007). According to <https://phdessay.com/a-syudy-on-fast-food/>, rational choice theory focused on actors where actors are seen as being purposive, or as having intentionality. That is, actors have ends or goals toward which their actions are aimed. It argued that rational actors are seen as having four basic elements: preferences (or values, utilities) and action is undertaken to achieve objectives that are consistent with an actor's preference hierarchy; actors' range of alternatives are constrained by the scarcity resources in the environment or by institutions that provide both

positive and negative sanctions within, which they make their decisions; possession of complete information about their values; the various courses of action through which actors can pursue them (Emerson, 1976; Friedman and Hechter, 1988). Therefore, this theory is applicable to this study on the premises that youth are involved this enterprise based on the fact that they have intention or purpose of engaging in any action, in case of oil palm fruit processing activities, which could be for enhancing their income, serve as means of livelihood and promoting food security out of different alternatives open to them within their communities. These youths have to take into consideration resources available to them and access to these resources, such as: modern processing facilities, credit facilities and access extension services; institutional constraints, which provide both positive and negative sanctions that serve to encourage certain actions and discourage others; having full information about oil palm fruit processing activities and other economic activities to make purposive choice among the alternative courses of action open to them in the communities.

### **MATERIALS AND METHODS**

The study was carried out in Ondo State, which is located in the Southwest geopolitical zone of Nigeria. The state has 18 local government areas (LGAs). A multi-stage sampling procedure was used to select respondents (youths) that were

involved in oil palm fruit processing activities. At the first stage, three LGAs were purposively selected, namely Owo, Ondo East and Idanre LGAs based on the prevalence of oil palm production and processing in their areas. At the second stage, 10% of oil palm fruit processing rural communities were proportionate selected, which translated to five, four and three communities from Owo, Ondo East and Idanre LGAs, respectively, making a total of 12 rural communities. Primary data were collected through questionnaires. Closed-ended questions were used to elicit quantitative data on socio-economic characteristics, their perception, constraints affecting youth involvement and their level of involvement. Data collected were analysed through the use of Statistical Package for the Social Sciences (SPSS) version 23. Descriptive statistical techniques, like frequency counts, percentages, means and standard deviation, were used to summarise data collected, while Chi-square and Pearson Product Moment Correlation analyses were used to draw inference on the hypothesis.

Involvement of youth in oil palm fruit processing activities was the dependent variable for this study was. This was conceptualised as the frequency of involvement, which was measured by asking the respondents to indicate how frequent they were involved in oil palm fruits processing activities on a four-point Likert-type scale of always (3), occasionally (2), rarely (1), and not at all (0) as employed by Alabi *et al.* (2020). Respondents' involvement was categorized into low, moderate and high-level using equal interval method. Perception of the youth towards their involvement in oil palm fruit processing activities was measured by asking the respondents to react to 14 perceptual statements on a five-point Likert rating

scale from Strongly Agree (5 points) to Strongly disagree (1 point) for the positive statements and reverse for the negative statements. Cut-off point of 3 was used to categorise their perception to favourable and unfavourable. Constraints militating against their involvement in oil palm fruit processing activities was measured using a four point Likert types scale of not severe (NS) [0 point], less severe (LS) [1 point], severe (S) [2 point], much severe (MS) [3 points] and very much severe (VMS) (4 points) These values were added and divided by 4 to get the mean scores of 2.5.

## RESULTS AND DISCUSSION

### Socio-economic characteristics

Results in *Table 1* show that mean age of the youths that are involved in oil palm fruit processing activities was  $27.2 \pm 2.6$  years. This implies that most of these respondents were creative, energetic, innovative proneness and are likely to be more productive in economic enterprises, these qualities could enhance their involvement in oil palm activities. This is similar to the findings of Alao *et al.* (2014) and Adisa *et al.* (2017), which reported that the mean age of youth involved in vegetable production was about  $28.3 \pm 5.5$  years. Majority (63.3%) of the respondents were males; indicating male dominate the youth participants in oil palm fruit processing activities in the study area, possibly because some of the processing activities are stressful. This agrees with the findings of Ohimain *et al.*, (2014), Ajayi and Solomon (2010) and Ekine and Onu (2008), who reported that more males

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than females were involved in oil palm processing. Majority (63.4%) of the respondents were married, indicating married youth were more involved in oil palm processing activities. This is in line with findings of Thomas and Eforuoku (2016), that majority of the youth involved in agricultural programme in Ondo State were married.

Results further reveal that majority (95.8%) of them had one form of education or the other, as most of them had completed secondary school, indicating high level of education and this could have positive implications on their attitude towards adoption of improved methods of processing of oil palm fruit. Olagunju (2008) had earlier observed that education will facilitate the adoption of innovations that will improve palm oil processing activities. The finding disagrees with Akangbe *et al.* (2011), who ascertained that there was a low level of education among oil palm processors in Nigeria. Higher percentage (54.7%) of the respondents indicated that their mean household size was  $4 \pm 2$  people, implying small household size, which may be due to their age and this could only guarantee few family labour for their processing activities. The finding similar to the findings of Akpomuvia (2010) assertion that a range of 4 - 6 members constitute the modal household size in rural areas of Nigeria.

The mean length of engagement in processing activities was  $5.1 \pm 2.7$  years, suggesting that respondents

were relatively new in the enterprise and this may have serious implication on their ability to make sound decisions as regards oil palm fruit processing activities. About 60% of the respondents had mean labour size of  $3 \pm 1$  workers. This implies they were operating on a small scale. Also, majority (81.9%) of the respondents indicated personal saving as the major source of capital to finance the enterprise. This implies that most of the respondents in the study area depend on informal sources of credits to finance their enterprise. This is similar to the finding of Adam and Bidoli (2017), that majority of rural dwellers make use of personal saving as a start-up capitals for agrobusinesses. This could have a negative implication on the ability of rural youths to acquire and utilize modern equipment needed for oil palm fruit processing activities. The result show that respondents mostly received information on oil palm processing through friends/neighbours (91.6%) and radio (90.2%). The results indicate that most of the respondents had multiple sources of information, which might influence their better understanding and knowledge of the activities they involved in. Higher percentage (59.2%) of respondents realized less than ₦20,000 monthly from oil palm processing activities with a mean monthly income of  $₦19,083.33 \pm ₦ 5,461.25$ . This suggests that respondents earned above the national minimum wage of ₦18,000 (USD 50) per month for the least paid in worker Nigeria before

recent pronouncement of ₦30,000, that is yet to be effective across the country, indicating that oil palm processing is a lucrative and profitable enterprise in Nigeria, as observed by Adeniyi *et al.* (2014) and Emokaro and Ugbekile (2014). There is the need for scaling up the income

potentials of the enterprise to make it more attractive to the unemployed rural youths, thereby minimize rural-urban migration. This is similar to the findings of Adesiji *et al.* (2016), who reported that the monthly mean income of oil palm processors in Kogi State, Nigeria was of ₦ 18,421.98.

**Table 1 - Selected socio-economics characteristics of respondents**

Socio-economic variables	Frequency	Percentage	Mean	S.D.
<b>Age</b>				
15 – 20	5	4.2		
21 – 25	27	22.5	27.23	2.56
>26	88	73.3		
<b>Sex</b>				
Male	76	63.3		
Female	44	36.7		
<b>Marital status</b>				
Single	39	32.5		
Married	76	63.4		
Divorced	5	4.2		
<b>Household size</b>				
1 – 2	22	18.3		
3 – 5	65	54.2	4.00	1.72
>5	33	27.5		
<b>Years in processing</b>				
1 – 5 years	87	72.5		
6 – 10 years	22	18.3	5.09	2.67
>10	11	9.2		
<b>Level of education</b>				
No formal education	5	4.2		
Primary education	18	15.0		
Secondary education	90	79.2		
Tertiary education	7	5.8		
<b>Number of labour</b>				
<3	38	31.7		
3-5	71	59.2	3.23	1.38
>5	11	9.1		
<b>Source of capital</b>				
Personal savings	71	59.2		
Bank loans	5	4.2		
Cooperatives	22	18.2		
Relatives/friends	5	4.2		
Salary earnings	17	14.2		
<b>Association/Group</b>				
Yes	44	36.7		

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No	76	63.3	
<b>Income (1 \$ US = ₦ 360)</b>			
< ₦20,000	71	59.2	
₦ 20, 000 – ₦ 40,000	38	31.7	₦19,083.33 ₦ 5,461.25
> ₦ 40,000	11	9.1	
<b>*Sources of information</b>			
Extension agent	27	22.5	
Research institutes	11	9.2	
Friends/Neighbours	110	91.6	
Television	55	45.8	
Radio	109	90.9	
Newspaper	5	4.2	

\*Multiple response; Source: Field survey, 2019

### Perception of respondents towards involvement in oil palm processing activities

Based on the cut-off point of 3 and the scale of measurement, which is *vice versa* for positive and negative statements, results in *Table 2* show that respondents favourably perceived positive statements that youth involvement in oil palm fruit processing activities are very lucrative and highly profitable ( $\bar{x}$  = 4.65); youth involvement in oil palm fruit processing activities provide employment opportunities ( $\bar{x}$  = 4.35); youth involvement oil palm fruit processing activities provides a lot raw materials to the industry ( $\bar{x}$  = 4.22) among others. However, youths were favourably perceived the negative statements that oil palm fruit processing activities require expensive equipment and machinery ( $\bar{x}$  = 1.96); oil palm fruit processing activities is labour intensive ( $\bar{x}$  = 1.84); poor pricing of oil palm products is major challenge to youth involvement ( $\bar{x}$  = 1.72) and people in this community look down on youths involved in oil palm processing ( $\bar{x}$  =

1.62) among others. The results show that respondents supported all the positive perceptual statements, while they disagreed to most of the negative statements implying that the youth in the study area perceived involvement in oil palm fruit processing activities as a welcome development; however, functional credit facilities should be provided by agricultural development stakeholders, including financial institutions and government, to boost and sustain their interest in the enterprise.

*Fig. 1* shows that higher percentage (57.9%) of the youths favourably perceived their involvement in oil palm fruit processing activities, while 42.1% indicated unfavourable perception. This implies that larger percentage of youth in the study area had favourably disposition towards involvement in oil palm fruit processing activities, as favourable perception may likely influence their involvement in oil palm processing activities. In order to sustain the interest of the youth in these activities, there is the need for the government to provide enabling



environment for them. This gives credence to the submission of Thomas and Eforuoku (2016), that that

majority of youth had favourable disposition to agricultural programmes in Ondo State

**Table 2 - Respondent's perception about oil palm fruit processing**

Statements	Ranked mean ( $\bar{x}$ )
Oil palm fruit processing activities are very lucrative and highly profitable	4.65
Oil palm fruit processing activities provide employment opportunities	4.35
Oil palm fruit processing activities provides a lot raw materials to the industry	4.22
Involvement in oil palm activities can standard of living of people	4.1
Oil palm fruit processing activities enhance growth and development of rural area	4.02
Involvement in oil palm fruit processing is way of reducing poverty	3.88
Oil palm fruit processing activities provides a lot raw materials to the industry	3.68
My family encourage my involvement in oil palm fruit processing activities	3.76
Oil palm fruit processing activities require expensive equipment and machinery	1.96
Oil palm fruit processing activities is labour intensive	1.84
A lot of hazards are associated with oil palm processing activities	1.78
Poor pricing of oil palm products is major challenge to youth involvement	1.72
People in this community look down on youths involved in oil palm processing	1.62
A lot of hazards are associated with oil palm processing activities	1.58

Cut off point = 2.50; Source: Field survey, 2019

Results in *Table 3* show that with the cut-off point of 1.50, respondents among others were always involved in picking of fresh fruit bunches ( $\bar{x}$ =2.71), package ( $\bar{x}$ =2.60) and gathering of bunches ( $\bar{x}$ =2.50). They were often involved in packaging ( $\bar{x}$ =2.24) and clarification of oil ( $\bar{x}$ =1.46) and harvesting ( $\bar{x}$ =1.43). The result indicates that respondents were less involved in digestion of boiled fruits, clarification of oil and

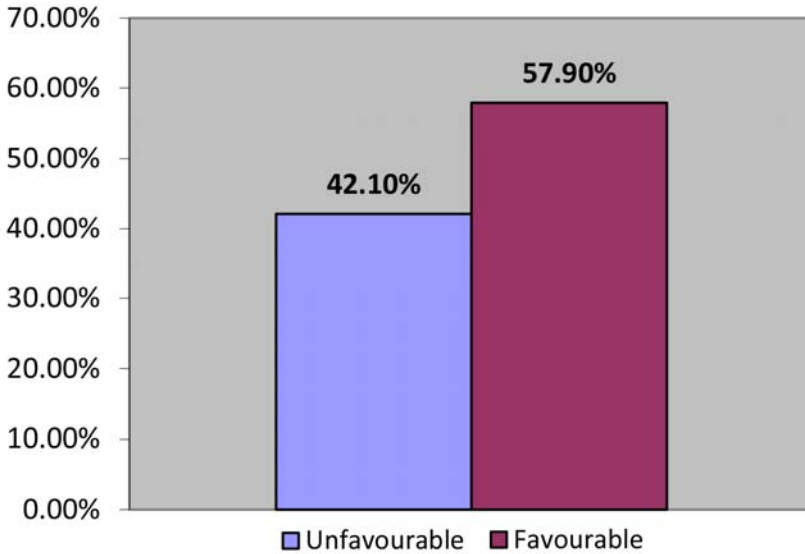
harvesting of fresh bunches. Youths were least involved in harvesting of bunches because they were still using traditional method of harvesting, which is highly risky and hazardous.

*Fig. 2* shows that 9.7% of the respondents were highly involved in oil palm fruits processing activities, majority (72.5%) were moderately involved, while 17.8% had low level of involvement oil palm fruit processing activities. This results

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implies very few respondents were highly involved in oil palm fruit processing activities; this is because majority of oil palm processors in the study area still depend on traditional method of processing as reported by Alabi *et al.* (2020), which discourages youth participation. It is therefore

imperative for the agricultural stakeholders including government should encourage the youth involvement by providing modern processing facilities at subsidize rate and create enabling environment to enhance their involvement in oil palm processing enterprises.



**Figure 1 - Level of perception of the youths**

**Table 3 - Respondents' involvement in oil palm fruit processing activities**

Activities	Mean
Picking of fresh fruit bunches	2.71**
Packaging	2.60**
Gathering of bunches	2.50**
Storage	2.27**
Marketing	2.15**
Chopping of bunches	1.82**
Removal of debris	1.69**
Boiling of palm fruits	1.58**
Extraction of crude oil	1.51**
Digestion of boiled fruits/foot trampling of boiled fruits	1.47
Clarification of oil	1.46
Harvesting of palm fruits	1.43

Cut-off point  $\geq 1.5$ ; **Source:** Field survey, 2019

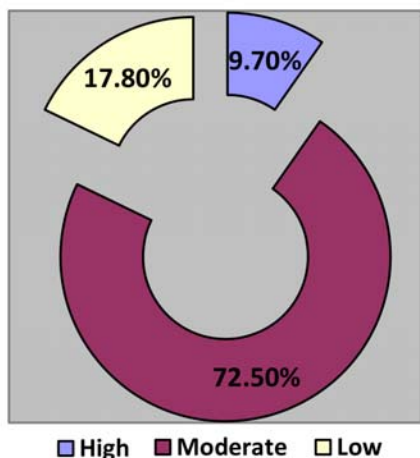


Figure 2 - Level of youth involvement in oil palm processing activities

### Constraints associated with youth involvement in oil palm fruit processing activities

Table 4 reveals that with the cut-off point of 2.5, respondents identified major constraints associated with their participation in oil palm fruit processing activities, as inadequate processing facilities ( $\bar{x} = 3.65$ ) was the prime constraint to oil palm processing activities. This confirms the findings of Alabi *et al.* (2020) and Adesiji *et al.* (2016), that established that lack of modern processing equipment as the prime challenge facing oil palm processing activities in Nigeria. Lack of funds/Inadequate credit facilities ( $\bar{x} = 3.65$ ) took second position among the constraints; this is because youth are poor and do not have access to credit facilities to acquire modern equipment and other processing inputs to enhance their processing activities. This substantiates

the reports of Alabi *et al.* (2020), who established that inadequate funds constitutes a major problem inhibiting oil palm processing activities in Nigeria. Inefficiency processing method/technology ( $\bar{x} = 3.15$ ) among others is another constraints that is equally important. As a result of this, many of the youths still depend on the manual/crude processing methods, which make oil palm processing activities laborious, tedious, unattractive, inefficient and lead to poor quality, and low quantity oil palm products. This is in tandem with findings of Akangbe *et al.* (2011), who identified crude and poor palm oil extraction technology as one of the major constraint to oil palm processing, Price of oil palm products, especially palm oil, is not stable at the local markets due to activity of middlemen, demand and unstable production costs and high cost of transportation also constitute a major constraint due to poor condition of rural roads leading to many farms and villages, which make it difficult for transporting oil palm products to the markets, and the traditional nature of palm oil production requires much labour, which are scarce in supply thereby slowing down productivity. This is in line with the reports of Nwaleji and Ojike (2018), who identified poor and inadequate transportation, poor pricing of oil palm products and inadequate labour supply as some of the prominent constraints to oil palm processing activities.

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**Table 4 - Constraints to oil palm fruit processing activities by youth**

Statement	Ranked mean ( $\bar{x}$ )
Lack of modern processing equipments	3.36**
Lack of funds/credit facilities	3.32**
Inefficiency processing method/technology	3.15**
High cost of transportation	2.98**
Unfavourable market situation	2.64**
Inadequate and high cost of labour	2.56**
Poor extension services	2.25
Lack of government support	1.59
Hazards associated with processing	1.43
Poor storage facilities	1.46
There is low household acceptance	1.41

Cut off point = 2.5; \*\* major constraints; **Source:** Field survey, 2019

### Testing of hypothesis

Results in *Table 5* reveal that marital status ( $\chi^2=11.000$ ,  $p \leq 0.05$ ), level of formal education ( $\chi^2=10.476$ ,  $p \leq 0.01$ ), primary occupation of the respondent ( $\chi^2=19.643$ ,  $p \leq 0.05$ ) and sources of labour ( $\chi^2=12.541$ ,  $p \leq 0.05$ )

had significant association to youth involvement in oil palm fruit processing activities. This implies that these variables determine the youth involvement in oil palm fruit processing activities.

**Table 5 - Result of Chi-square analysis between socio-economic characteristics and youth involvement in oil palm fruit processing activities g**

Variable	$\chi^2$	D.f	p-value
Sex	1.473	2	0.479
Marital status	11.0	4	0.027
Religion	4.714	2	0.095
Formal education	10.476**	2	0.005
Primary occupation	19.643*	10	0.033
Social affiliation	3.896	4	0.420
Sources of capital	8.832	10	0.548
Sources of labour	12.541*	4	0.014

\*\*Correlation is significant at the 0.01 level; \*Correlation is significant at the 0.05 level;

**Source:** Field survey, 2019

The results in *Table 6* show that number of labour ( $r= 0.7460$ ,  $p \leq 0.01$ ) and monthly income ( $r=0.601$ ,  $p \leq 0.01$ ) had positive and significant relationship to the youth involvement in oil palm fruit processing activities. The findings imply that the higher the

number of labours employed by the youth involved in oil palm fruit processing activities, the more their involvement in oil palm fruit processing activities. Also, the higher the income the youth realized from oil palm fruit processing activities, the

higher their involvement. This is similar to the findings of Akpan *et al.* (2015), who reported that income had relationship with youth participation

in agricultural activities. Based on these findings, null hypothesis is rejected, while alternative the hypothesis is accepted.

**Table 6 - Result of Pearson's correlation analysis between socio-economic characteristics and youth involvement in oil palm fruit processing activities**

Variables	Pearson correlation coefficient (r)	p-value
Age	0.208	0.354
Household size	- 0.226	0.312
Years of oil palm processing	- 0.385	0.077
Number of labour	0.741**	0.000
Years of experience	- 0.267	0.229
Income	0.601**	0.003

\*\*Correlation is significant at the 0.01 level; **Source:** Field survey, 2019

### CONCLUSIONS

Based on the findings of the study, youth involvement in oil palm fruits processing activities was moderate and many of them were favourably perceived their involvement in oil palm fruit processing activities. However, several constraints were identified by the youth that impede their involvement in these activities include lack of modern processing facilities, lack of funds/inadequate credit facilities and inadequate processing technology. Also, income from oil palm fruit processing activities and numbers of labours were found to be significantly related to youth involvement in oil palm fruit processing activities. It is therefore recommended that agricultural development stakeholders including government and financial institutions should provide adequate, and functional credits facilities to these youths in order to encourage/promote

their involvement. Appropriate and affordable harvesting machines and processing facilities should be fabricated by relevant stakeholders, such as agricultural engineers and local fabricators. Also, enabling environment through provision of good road network to rural areas should be provided by the governments at all levels. Finally, capacity building should be provided to the youth through adequate training on modern processing technology to enhance their involvement in oil palm fruit processing activities.

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