

**FACTORS INFLUENCING GENDER INVOLVEMENT IN OIL PALM PRODUCTION IN  
AYEDADE LOCAL GOVERNMENT AREA OF OSUN STATE.**

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### ABSTRACTS

This study examined factors influencing gender involvement oil palm production in Ayedaade local government area of Osun State, Nigeria. The specific objectives are to describe the socioeconomic characteristics of respondents in the area, identify source and frequency of information received oil palm production, factors influencing oil palm production. Random sampling was used to select one hundred oil palm producers. Data were collected using questionnaire and interview schedules. The analytical tools used were descriptive statistics and linear regression. The finding revealed that 72.0% of the farmers were female with mean age of 43.2 years. Also, 54.0% of the respondents had non-formal education, 41.0%. The mean household size of the respondents was 7.0 persons while that of farming experience was 11.3 years. Further findings revealed that extension agents (70%) and neighbour (50%) were the major sources of information on oil palm production. The result of linear regression revealed that the coefficients of farm size (6.254714), cooperative membership (66.79103) and extension access (43.96707) had significant influence on gender involvement in oil palm production at 1% level of probability while the age (-2.533662) and marital status (74.73063) had significant influence on gender involvement in oil palm production at 10% level of probability. It is recommended that men should be encouraged to engage in oil palm production through incentive supports. Also, older farmers should be encouraged to embark on oil palm production.

**Keywords:** Gender; Involvement; Oil-palm; Production

### INTRODUCTION

Oil palm (*Elaeis-guineensis*) is regarded as a stabilizing crop to global food security especially in developing countries and has become an increasingly important driver of economic development and poverty reduction in the major producing countries of South-east Asia, Central and West Africa (Ibrahim *et al.*, 2018 ). Oil palm is an important agricultural crop which yield three important sources of food namely palm oil, palm kernel oil and palm kernel cake all of which are very important both locally and internationally in the world market (Meike, 2013). Oil palm production involves activities from seedling sourcing, planting, fertilizer/manure application, weed control and management, harvesting, and transportation of fresh fruit bunches to home or mills.

The oil palm sector in Nigeria is widely carried out by small holder producers who contribute over eighty per cent of national palm oil and palm kernel output employing inefficient processing techniques which results in twenty to fifty per cent losses of potential palm oil production (Ajisafe, 2016). Generally, palm oil is transported from the supply regions of southern Nigeria to the demand regions of Northern Nigeria (Anzhanhu, 2017). Gender analysis in agriculture is therefore an effort towards the understanding of how men and women differ in their activities and undertakings, regarding access to and control over production resources, and participation in decision making. Due to its economic value, palm oil processing is considered as a traditional source of revenue for people in Nigeria, The biggest constraint to the effective recognition of men and women actual roles and responsibilities in oil palm sector is therefore, the scarcity of gender disaggregated data available. In the same vein, with the continuous migration of rural men outside the farming sector in search of paid employment, labour supply for oil palm production becomes a problem and thereby increasing women time and labour supply to oil palm production. Rural-Urban migration especially among rural youths also cuts off rural youth's involvement in agriculture, leaving farming activities on the hands of aged men and women. As a result of the continual changes in rural agriculture labour supply, appraisal of gender roles in oil palm production becomes essential in the study area. The broad objective of this study was to examine factors influencing oil palm production in Ayedaade Local Government Area of Osun State. The specific objectives are to describe the socio-economic characteristics of the respondents in the study area, source and frequency of information received oil palm production and factors influencing gender involvement in oil palm production.

### METHODOLOGY

The study was conducted in Ayedaade local government area of Osun State in South Western of Nigeria. The State is made up of 30 Local Government Area with the capital in Osogbo. Its headquarters are in the town of Gbongan. Ayedaade lies between latitude of 7° 27' 59.99"N and longitude of 4° 20' 59.99"E of the Greenwich meridian (Osun State Geographical Information System, 2016). Ayedaade local government Area is dominated by the Yoruba people. The local government area has its headquarter are Gbongan. The total area of 1,113

km<sup>2</sup> and a population of 150,392 at the 2006 census. Ayedaade local government is divided into (11) eleven Political wards for political electoral and administrative conveniences. The local government areas share common boundaries with Wakajaiye local government area to the north of “Osun State, to the South Ode-omu local government area to the East and West respectively (Osun State Ministry of Information, 2016). Multistage sampling techniques

were used in the study. The first stage involved random selection of Ayedaade LGAs. The major crop grown in the LGA were; yam, maize, cassava and cocoyam while the major cash crops include; cocoa, coffee, cashew and oil palm. The second stage involved random selection of ten (10) communities from the LGAs. Third stage involved the use of proportional sampling method to select 10% of oil palm producers from the sampling frame.

**Table 1: Showing sample distribution of the respondents in the study area**

States	LGAs	Communities	Sampling Frame	Sample Size (10%)
<b>Osun State</b>				
		Kuta	110	11
		Kutaii	100	10
		Olufi	122	12
		Olufiokun	61	6
		Okeodo	130	13
		Ayingba	74	7
		Lagorefolo	56	6
		Wakajate	54	5
		Wabajaye	120	12
		Araromi	184	18
<b>Total</b>	<b>1</b>		<b>1011</b>	<b>100</b>

Data for this study was collected using well-structured interview guide. Data collected was subjected to analysis using both descriptive and inferential statistics. The descriptive statistics involves; frequency distribution, percentages and mean while the inferential statistic involves, linear regression Pearson. Objective i and ii were achieved using descriptive statistics such as (frequency distribution, percentage, mean)

**Linear regression**

Objective iii Factors influencing gender involvement in oil palm production was achieved using linear regression. The model is expressed in implicit form as shown in equation

$$Y = f(X_1, X_2, X_3, X_4, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, U) \dots\dots\dots(1)$$

The explicit form of the regression model used for the study was expressed as

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + U \dots(2)$$

- Y = Output of oil palm (Kg).
- X<sub>1</sub>= Farm size (hectare),
- X<sub>2</sub> = producers age (years)
- X<sub>3</sub> = Oil producers experience (years),
- X<sub>4</sub> = Sex (yes=1, no=0).
- X<sub>5</sub> = Marital status (married=1, no=0),
- X<sub>6</sub> = Education level (Years) ,
- X<sub>7</sub> = Household size (numbers)
- X<sub>8</sub> = Cooperative membership (years) ,
- X<sub>9</sub> = Credit access (naira),
- X<sub>10</sub> = Market access(yes=1,n0=0)
- ,X<sub>11</sub>= Extension access(yes=1, no=0)

**RESULTS AND DISCUSSION**

**Socio-economic characteristics of palm oil producers**

The mean age of oil palm producers in Table 2 was 43.2 years. This indicated that oil palm producers were still within their active age of farming, strong and energetic, which could make them seek for means of increasing the output of oil production that will enhance their livelihood. This is in line with Ibitoye *et al.* (2011), who indicated that majority of oil palm producers in Ondo State were in their productive age. Table 2 indicated that 72.0% of oil palm producers’ were females while 28.0% were males. This implies that oil palm business in the study is dominated by female forks. This might be due to activities involved in oil palm production that is mostly carried out by females. This finding was contrary to that of Ibitoye *et al.* (2011), who opine that majority of farmers in Ondo State were males. Table 2 revealed that 54.0% of the respondents had non-formal education while 24.0% had secondary education. Also, 15.0% of the respondents had primary education while 7.0% had tertiary. This implies that most of the respondents did not have formal education in the study area. However, this could pose a negative threat to oil palm business in the study area. This finding agreed with Pelemo *et al.* (2019), who stated that larger percentage of cashew farmers in Kogi State, Nigeria had non-formal education. Table 2 also indicated that 41.0% of the respondents had between 6-10 persons in their household while 40.0% had <6 persons in their household. The mean household of the respondents was 7.0 persons, implying that oil palm producers

had moderate household size. However, large and moderate household size to some extent have the ability to reduce the amount spend on hiring labour. This finding was in line with Pelemo *et al.* (2018), who opine that most of yam farmers in Kogi had moderate household size. Furthermore from Table 2 revealed that 38.0% of oil palm producers had experience of between 11-15 years while 29.0% had experience of between 6-10 years. The mean farming experience of the respondents was 11.3 years, implying that oil producers had moderate years of experience in oil palm production. However, this is expected to enhance their production output. This finding agreed with Mohammed *et al.* (2019), who stated that majority of farming populace in Niger State, Nigeria had moderate experience.

Table 2 Indicated that 73.0% of the respondents were married while 20.0% were single. Also, 6.0% and 1.0% were widowed and divorced respectively. This finding implies that majority of respondents were married with family responsibilities which could make them seek for knowledge on new varieties of oil pam that will increase their production. This finding is in consonance with Dimelu *et al.* (2014), who reported that majority of rural farmers were

married in Enugu State, Nigeria Table 2 revealed that 66.0% of the respondents were farmers while 29.0% were traders. Also, 5.0% were fishermen. This implies that most of the respondents had farming as their primary occupation.

Table 2 showed that 30.0% of the respondents were traders while 25.0% were farmers. Also, 20.0% were civil servants while 14.0% and 1.0% work in private sectors and craftsmanship. These results revealed that majority of the respondents had secondary occupation. Table 2 furthered revealed that 58.0% of oil palm producers had <6 hectares of farm land while 20.0% and 13.0% had between 6-10 and >15 hectares respectively. The mean farm size of oil producers was 6.9 hectares, implying that oil palm producers had moderate farm size. This finding is in line with that of Aliber and Hart (2016), who revealed that majority of farmers in Sub-Saharan African countries cultivate on moderate farm land. Table 2 indicated that 34.0% of the respondents acquired land through inheritance while 10.0% acquired land through purchase. Also, 7.0% and 2.0% acquired land through gift and lease respectively. This implies that most of the respondents inherited their farm land.

**Table 2: Socio-economic characteristics of palm producers (n=100)**

<b>Variables</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Mean</b>
<b>Age of respondents</b>			
< 31	23	23.0	43.2
31 – 40	25	25.0	
41 – 50	29	29.0	
> 50	23	23.0	
<b>Sex of the oil producers</b>			
Female	72	72.0	
Male	28	28.0	
<b>Education status</b>			
Non-formal	54	54.0	4.6
Primary	15	15.0	
Secondary	24	24.0	
Tertiary	7	7.0	
<b>Household size</b>			
< 6	40	40.0	7.0
6 – 10	41	41.0	
11 – 15	15	15.0	
> 15	4	4.0	
<b>Farming experience</b>			
< 6	13	13.0	11.3
6 – 10	29	29.0	
11 – 15	38	38.0	
> 15	20	20.0	
<b>Marital status</b>			
Single	20	20.0	
Married	73	73.0	
Widowed	6	6.0	
Divorced	1	1.0	
<b>Primary occupation</b>			
Fishing	5	5.0	
Farming	66	66.0	
Trading	29	29.0	

<b>Oil palm farmland</b>			
< 6	58	58.0	6.9
6 – 10	20	20.0	
11 – 15	9	9.0	
> 15	13	13.0	
<b>Method of farmland acquisition</b>			
Inheritance	34	34.0	
Purchase	10	10.0	
Gift	7	7.0	
Lease	2	2.0	

Sources: Field survey, 2019

#### Source of information on oil palm production

Table 3 revealed that extension (70.0%) ranked 1<sup>st</sup> as the major source for information on oil palm production while neighbour 50.0% was ranked 2<sup>nd</sup>. Also, 44.0% and 35.0% sourced information through relatives and radio respectively while 32.0%, 22.0% and 9.0% sourced information through cooperative, ADP and television respectively. This implies that

extension agents and neighbor were the major sources of information on oil palm production in the study area. This finding agreed with by Ajani and Onwubuya (2012) revealed that extension agent were the major sources of information on indigenous maize storage among among farmers in Anambra State Nigeria..

**Table 3: Sources of information on oil production (n=100)**

Sources of information	Frequency	Percentage
Radio	35	35.0
Television	9	9.0
ADP	22	22.0
Relatives	44	44.0
Cooperative	32	32.0
Neighbour	50	50.0
Extension	70	70.0

Sources: Field survey, 2019

Note: ADP= Agricultural Development Programme

#### Frequency of information on oil production

Table 4 showed that 32.0% of the respondents received information occasionally on radio while 21.0% received information always. Also, 44.0% received information occasionally on television while 18.0% received always. Further findings revealed that 40.0% received information occasionally from

ADP while 11.0% received always. The findings further revealed that 36.0% received information from information from cooperative occasionally while 8.0 received information always. In addition, 43.0% and 35.0% received information from extension agents and neighbor always

**Table 4: frequency of information on oil production (n=100)**

Variables	Always	Occasionally	Never
Radio	21 (21.0)	32 (32.0)	47 (47.0)
Television	18 (18.0)	44 (44.0)	38 (38.0)
ADP	11 (11.0)	40 (40.0)	49 (49.0)
Relative	38 (38.0)	23 (23.0)	39 (39.0)
Cooperative	8 (8.0)	36 (36.0)	56 (56.0)
Neighbour	35 (35.0)	17 (17.0)	48 (48.0)
Extension	43 (43.0)	23 (23.0)	34 (34.0)

Sources: Field survey, 2019

Note: ADP= Agricultural Development Programme

#### Factors Influencing Gender Involvement in Oil Palm Production

The result of the linear regression analysis in Table 5 showed R<sup>2</sup> value of 0.31 which implies that 35.9%

variation in the output of oil palm in the study area was explained by the independent variables included in the model. Farm size was positive and significant at 1% level of probability, signifying that an increase

in farm size led to an increase in oil palm out. This result means that the larger the farm cultivated by the farmers, the greater the output. This agrees with Aniedu (2016), who established that an increase in farm size led to an increase in the adoption of improved yam production technologies in Abia State, Nigeria

Age was also negative and significant at 1% probability level in the study area, implying that as the oil farmers grow older, their production performance will reduce. This agrees with the findings of Abdullahi and Tashikalma (2016) on factors influencing the adoption of gum Arabic production technologies in Gombe State, Nigeria

who stated that as farmers grow older, they are likely to resist use of new farm innovation. The coefficient of marital status was positive and significant at 10% level of probability, implying that marital status tend to contribute to output of palm production. The coefficient of cooperative was positive and significant at 1% level of probability, implying that membership of cooperative tend to increase oil palm output. This might be attributed incentives and capital accessed from cooperative membership. The coefficient of extension was positive and significant at 1% level of probability, implying that access to extension services will enhance farmers output on oil palm production

**Table 5: Factors influencing gender involvement in oil palm production (n=100)**

Variables	Coefficient	T-value
Farm size	6.254714	2.96***
Age	-2.533662	-1.73*
Experience	2.206171	0.61
Sex	15.25703	0.42
Marital status	74.73063	1.77*
Education level	1.858991	0.58
Household size	4.313381	0.90
Cooperative membership	66.79103	3.32***
Credit access	-49.59547	-0.94
Market access	8.25905	0.15
Extension access	43.96707	2.43***
Constant	251.7695	2.65***

R-squared=0.3588 Adj R-square =0.2787 F-value=0.0000  
Sources; Field survey, 2018

## CONCLUSION AND RECOMMENDATIONS

Oil palm production was female dominant and most of the respondents in the study area were still in their mid-age. Moreso, most of the respondents in the study area had non-formal education Also, extension and neighbor were the major sources of awareness on oil palm production.. The coefficients of farm size, age, marital status, cooperative and extension had significant influence on gender involvement in oil palm production. It is recommended that men should be encouraged to engage in oil palm production through incentive supports. Also, the coefficient age was negatively significant. Therefore, older farmers should be encouraged to embark on oil pal production.

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