



## Women Involvement in Cocoa Production in Odigbo Local Government Area, Ondo State, Nigeria

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### Abstract

Women play an important role in cocoa production; however their role has gained less agricultural productivity in their own cocoa production enterprise. Thus, this study assessed level of women involvement in cocoa production in Odigbo Local Government Area, Ondo State, Nigeria. The study employed a multi-stage sampling procedure to collect data on socio-economic characteristics, constraints and level of involvement in cocoa production from 187 respondents with the aid of interview schedule. Data collected were analyzed using descriptive and inferential statistics. Results reveal that majority (76.5%) of the women involved in cocoa production had formal and vocational education; the average age of the respondents was 46 years, while most (74.3%) were not member of any cooperative society. Further, the mean scores show that lack of efficient credit facility, lack of training on value addition (2.00), and high cost of input (0.58) were the major constraints to women involvement in cocoa production in the study area. In addition, drying (1.00), quality control (1.00), farm sanitation (1.00) respectively were the major cocoa production activities practiced by the women. Subsequently, education ( $\chi^2=10.182$ ;  $p\leq 0.05$ ), other farming enterprises ( $\chi^2=9.514$ ;  $p\leq 0.05$ ), farming experience ( $r=0.148$ ;  $p<0.05$ ) correlated significantly with level of involvement in cocoa farming activities. Therefore, involvement in cocoa production depends on women educational attainment, other farming enterprises and farming experience. The study therefore recommends continuous training, retraining of women cocoa farmers, and provision of efficient credit facilities to sustain involvement of women in cocoa production.

**Keywords:** Cocoa production, Constraints, Training, Credit facilities, Women

### Introduction

Cocoa production is an important driver of Nigeria's economy and was a major foreign exchange earner for Nigeria (Verter and Bečvářová, 2014). In Nigeria, Cocoa is a strategic economic asset and plays a critical role in sustaining the country's workforce (Bello and Mitchell, 2018). Consequently, it provides a means of livelihood for more than five million people (Olasupo and Aikpokpodion, 2019). Women play significant role in the economic development of any country; their veritable contribution to farm labour and processing cannot be overlooked. It is noteworthy that women play an important role in cocoa production as unpaid family labour, however their role has gained less economic attention and resulted to low productivity due to inequitable access to land and other production resources.

Cocoa, like other agricultural production

enterprise is prevalent in rural communities where gender stereotypes prevail based on varying socio-cultural conditions. Women involved in agriculture are faced with different challenges constraining them from benefiting from the limited opportunities in terms of ownership and access to land. In addition, Al-Abedallat (2016) posited that women may not easily have access to credit since they mostly do not have access to land they can call their own. Abidogun *et al.* (2019) equally noted that an inferior position has been ascribed to the women in the society by the male dominated culture in Nigeria; customs forbidding women from owning land, taboos and gender division of labour keeps women subordinated to men. Women represent a substantial number of the total agricultural labour force; around two-third of the female labour force in developing countries are engaged in agriculture. According to Food and Agriculture Organization of the United Nations

(FAO, 2011a), it was reported that agriculture can be an important engine of growth and poverty reduction. But the sector is under performing in many developing countries in part because women, who represent a crucial resource in agriculture and the rural economy through their roles as farmers, labourers and entrepreneurs, almost everywhere, face more severe constraints than men in access to productive resources.

Women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes (FAO, 2011a). However, in view of these important roles played by rural women, and their contributions, agricultural productivity is still low due to factors mitigating rural women from having access to production assets and resources, such as land, labour, and credit facilities, amongst others. Considering the fact that cocoa production is prominent in Odigbo Local Government Area (LGA) of Ondo State, Nigeria, it becomes imperative to assess the level of women involvement in cocoa production in the LGA.

### ***Hypotheses of the Study***

H01: There is no significant relationship between selected socio economic characteristics and level of involvement of women in cocoa production in Odigbo Local Government.

### **Methodology**

This study was carried out in Odigbo LGA of Ondo State, Nigeria; a State that ranks highest on the list of states designated as cocoa producing, contributing 24% of the country's overall output (National Bureau of Statistic (NBS, 2013). Odigbo LGA headquarters is located in Ore town. The LGA is within the the rainforest zone, the vegetation of the area supports the cultivation of prominent food and cash crops such as cocoa, oil palm plantain, cassava, banana, amongst others. The population of the study comprised of women in cocoa production in Odigbo LGA, Ondo State. A Multistage sampling procedure was used. Odigbo LGA is divided into eleven (11) political wards.

First stage involved random selection of four (4) wards. The selected wards are; Agbagbu, Oniparaga, Odigbo, and Ore II. In the second stage, due to lack of sampling frame, snowball technique was used to identify 311 women involved in cocoa production across the selected wards. Finally, from the identified women, one hundred and eighty-seven (187) of the women involved in cocoa production were randomly selected to give the sample size for this study. Data were obtained from respondents with the use of interview schedule. Data obtained were subjected to both descriptive and inferential statistics (Chi Square and Pearson Product Moment Correlation). Constraint was measured as Severe =2, Mild = 1, and Not a constraint = 0. Where a respondent chose severe, score of 2 was assigned, and so on. Scores for each of the items were computed and divided by n (187) to give the mean values. Similarly, score of 1 was assigned to involved, while score of 0 was assigned to not involved. Thus, scores for each of the items were computed and divided by n (187) to give the mean values.

## **Results and Discussion**

### ***Socioeconomic Characteristics of Respondents***

As shown in Table 1, the average age of the women involved in cocoa production was 46years. This implies that women cocoa farmers were in their economically active age and can participate actively in cocoa production activities. In addition, the average household size of respondents was 6 persons. This suggests a relatively low household and could affect availability of family labour which is often affordable and encourage sustained participation in agricultural production as against reliance on hired labour. This is in line with Dery and Dongzagla (2020) who reported that female cocoa farmers tend to rely more on the services of hired labor. In terms of education, as low as 23.5% of the women cocoa farmers had no formal education, while majority (76.5%) had formal and vocational education. This implies that the women are likely to be receptive to new practices if exposed to training as education equip framers with all necessary information needed for improved participation in agricultural activities. This disagrees with the finding of Dery *et al.* (2020) who in their study, reported low level of education among female cocoa farmers. Further, Table 1 shows that the average cocoa farming experience among respondents was 24 years. This suggests that the women have experience to sustain their involvement in cocoa production. This is tandem with Mokgadi and Oladele (2013) who posited that years of farming experience is an important factor for success in faming because as the farmers

increase in years of farming experience, they tend to gain more useful information and practical skills about farming. Subsequently, the average farm size cultivated by the women in cocoa production was 7.4 acres. This implies that majority of the woman cocoa farmers were small scale farmers and had limited access to land for farming due to the tenure system. This conforms to the report of FAO (2011b) that women in agriculture are particularly disadvantaged in accessing productive resources like land among others. Result in Table 1 further indicates that majority (74.3%) of the respondents were not members of cooperative societies. This suggests that the women are likely to face limited access to credit, as membership of cooperative or agricultural association improves farmers' access to credit and enable them to innovate. This is in agreement with the report of Busari and Aminu (2017) that accessibility and effective utilization of micro-credit facilities via membership of cooperative societies boost farmers' productivities and helps them in their business activities. Ajah (2013) equally noted that membership in association is very important as it enables farmers to get access to extension services, market and credit facilities.

### ***Constraints militating against Women Involvement in Cocoa Production***

The mean scores in Table 2 shows that lack of efficient credit facility and lack of training on value addition (2.00) each were the most severe constraints to women involvement in cocoa production in the study area. This implies that the women would find it relatively difficult to expand their production capacity as a result of lack of credit. Busari *et al.* (2017) posited that accessibility and effective utilization of micro-credit facilities via membership of cooperative societies boost farmers' productivities. In addition, high cost of input (0.58) was the other severe constraint experienced by the women cocoa farmers in the study area. This indicates that with high cost of input, the women are likely to resort to unsustainable farming practices and invariably affect their productivity. This is in agreement with the assertion of Olutegbe and Sanni (2021) that high cost of input such as appropriate agrochemicals can force farmers to jettison good cocoa production practices by sourcing for and use of inappropriate agrochemicals

### ***Involvement in Cocoa Production***

As shown in Table 3, the mean scores show that the women were highly involved in drying (1.00),

quality control (1.00), and farm sanitation (1.00). The respondents were equally involved in other activities in the cocoa production process. This corroborates the report of Omoare *et al.* (2016) that these practices were regular activities carried out by cocoa farmers. However, the low involvement of the women in transportation of cocoa (0.76) indicates that women rarely get involved in this aspect of cocoa production, and it could be an exclusive activity for the male farmers. This is in consonance with the assertion of Eremi *et al.* (2019) that many rural women cocoa farmers have very little voice in decision making when it comes to cocoa transportation and marketing.

### ***Test of Hypothesis***

As shown in Table 4, educational attainment ( $\chi^2=10.182$ ) and involvement in other farming enterprises ( $\chi^2=9.514$ ) were significantly related with level of women involvement in cocoa farming activities. This implies that education is important in sustaining women involvement in cocoa production. Consequently, involvement in other farming enterprises suggests that the women were engaged in multiple economic activities which could improve their income and enhance ability to access cocoa production resources. In addition, Table 5 shows significant relationship existed between years of cocoa farming experience and involvement in cocoa production among women farmers ( $r=0.148$ ). The positive correlation implies that as years of experience increases, women involvement in cocoa production increases. This is in agreement with Akerele *et al.* (2020) who noted that increase in the experience of women in cassava processing will lead to increase in access to loan and production.

### ***Conclusion***

This study shows that, women involved in cocoa production were in their active age, experienced in cocoa farming, and majority did not belong to cooperative association. Consequently, lack of access to credit, lack of training on value addition, and high cost of inputs were the major constraints to women involvement in cocoa production. Therefore, it is recommended that the women should be encouraged to form/join cooperatives, and training on cocoa value addition should be provided in order to create access to credit and enhance diversification in value addition.

**Table 1: Distribution of Respondents by Socio-economic Characteristics (n = 187)**

Variables	Frequency	Percentage	Mean
<b>Age</b>			
23 - 36 years	59	31.6	46±14
37 - 50 years	75	40.1	
51 - 64 years	29	15.5	
65 years and above	24	12.8	
<b>Marital status</b>			
Single	11	5.9	
Married	149	79.7	
Divorced	6	3.2	
Widowed	21	11.2	
<b>Household size</b>			
2 – 4 people	51	27.3	6±3 people
5 – 7 people	79	42.2	
8 – 10 people	48	25.7	
11 people and above	9	4.8	
<b>Education</b>			
No formal education	44	23.5	
Primary	48	25.7	
Secondary	80	42.8	
Tertiary	10	5.3	
Vocational	5	2.7	
<b>Cocoa farming experience</b>			
7-19 years	72	38.5	23.7±12.9 years
20-32 years	77	41.2	
33-55years	34	18.2	
56 years and above	4	2.1	
<b>Farm size (acre)</b>			
1-6	100	53.5	7.4±5.9
7-12	66	35.3	
13-18	15	8.0	
above 18	6	3.2	
<b>Membership of cooperative</b>			
Yes	48	25.7	
<b>No</b>	<b>139</b>	<b>74.3</b>	

Source: Field Survey, 2020

**Table 2: Distribution of respondents by constraints to involvement in cocoa production (n = 187)**

Constraints	Not a constraint	Mild constraint	Severe constraint	Mean	Rank
Inadequate skills in disease management	70.6	29.4	-	0.29	6 <sup>th</sup>
Poor quality of output	97.3	2.7	-	0.27	7 <sup>th</sup>
Lack of efficient credit facility	-	-	100.0	2.00	1 <sup>st</sup>
Lack of access to extension service	55.9	44.9	-	0.45	4 <sup>th</sup>
Lack of access to information on improved practices	100.0	-	-	0.00	13 <sup>th</sup>
Partner/husband against my involvement in cocoa production	92.0	8.0	-	0.08	11 <sup>th</sup>
High cost of inputs	55.6	31.0	13.4	0.58	3 <sup>rd</sup>
Poor market accessibility	99.5	0.5	-	0.01	12 <sup>th</sup>
Lack of sustainable water management	90.9	8.6	0.5	0.10	10 <sup>th</sup>
Lack of training on value addition	-	-	100.0	2.00	1 <sup>st</sup>
Unavailability of Processing facilities	85.0	15.0	-	0.15	9 <sup>th</sup>
Labour unavailability	84.5	11.8	3.7	0.19	8 <sup>th</sup>
Theft/pilferage	72.7	15.0	12.3	0.40	5 <sup>th</sup>

Source: Field survey, 2020

**Table 3: Distribution of respondents by their involvement in cocoa production (n = 187)**

Cocoa production activities	Involved	Not involved	Mean	Rank
Planting	59.4	40.6	0.59	15 <sup>th</sup>
Seedling nursery	87.2	12.8	0.87	10 <sup>th</sup>
Land preparation	73.3	26.7	0.73	13 <sup>th</sup>
Weed control	24.6	75.4	0.25	16 <sup>th</sup>
Fertilizer application	11.2	88.8	0.11	18 <sup>th</sup>
Provision of shades	82.4	17.6	0.82	11 <sup>th</sup>
Pruning	62.0	38.0	0.62	14 <sup>th</sup>
Cocoa farm maintenance and crop husbandry	97.3	2.7	0.97	7 <sup>th</sup>
Cocoa protection	94.7	5.3	0.95	8 <sup>th</sup>
Crop harvest, post-harvest handling	90.9	9.1	0.91	9 <sup>th</sup>
Pod breaking	97.9	2.1	0.98	6 <sup>th</sup>
Fermentation	99.5	0.5	0.99	4 <sup>th</sup>
Drying	100.0	-	1.00	1 <sup>st</sup>
Packaging and storage	99.5	0.5	0.99	4 <sup>th</sup>
Quality control	100.0	-	1.00	1 <sup>st</sup>
Transportation and shipping practices/cocoa merchandise	75.9	24.1	0.76	12 <sup>th</sup>
Farm sanitation	100.0	-	1.00	1 <sup>st</sup>
Farm record keeping	20.9	79.1	0.21	17 <sup>th</sup>

Source: Field survey, 2020

**Table 4: Chi-square analysis of respondents' socio-economic characteristics and involvement in cocoa production**

Variable	N	$\chi^2$ -value	Df	p-value	Decision
Marital status	187	3.204	3	0.361	Not significant
Educational level	187	10.182	4	*0.037	Significant
Involvement in other farming enterprise	187	9.514	1	*0.002	Significant

\*Significant at  $p \leq 0.05$

**Table 5: Pearson Product Moment Correlation of respondents' socio-economic characteristics and involvement in cocoa production**

Variable	N	r-value	p-value	Decision
Age	187	-0.116	0.115	Not significant
Years of cocoa farming experience	187	0.148	*0.043	Significant
Farm size	187	-0.070	0.340	Not significant

\*Significant at  $p < 0.05$

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