

# Women's Involvement in Cassava Value Chain Activities in Akpabuyo Local Government Area of Cross River State, Nigeria

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## Abstract

*The main purpose of this study was to investigate women's involvement in cassava value chain activities in Akpabuyo LGA of Cross River State, Nigeria. The specific objectives were to identify the major value chain activities in the study area; investigate the value chain activities participated by women in the area; identify the constraints affecting effective involvement of women in cassava value chain in the area; and evaluate possible suggestions to improve effective involvement of women in cassava value chain activities in the area. Multi-stage and purposive sampling techniques were adopted to select 216 respondents for the study. The result revealed that the major cassava value chain activities in the area were processing ( $\bar{x}=3.07$ ), marketing ( $\bar{x}=2.92$ ), production ( $\bar{x}=2.87$ ) and packaging ( $\bar{x}=1.86$ ). The findings of this research also indicated that women participate more in cassava processing ( $\bar{x}=1.94$ ), rank=1<sup>st</sup>), followed by production ( $\bar{x}=1.85$ ). The respondents indicated that lack of adequate production and processing tools ( $\bar{x}=3.81$ ), poor access to land ( $\bar{x}=3.78$ ) and lack of financial support ( $\bar{x}=3.72$ ), as the three most critical constraints affecting effective involvement of women in cassava value chain activities in the study area. The respondents' suggestion to improve their involvement in cassava value chain activities revealed that financial support, ease of transportation and access to improved cassava cuttings, with means of 3.79, 3.78 and 3.63, respective, were the most rated factors. The study concluded that women in Akpabuyo local government area are significant actors in the country's agricultural sector, particularly the cassava sub-sector, and as a result, food security. Thus, it was recommended that value chain actors and promoters should make credit facilities available to women in order to encourage their effective involvement in cassava value chain activities in the area, among others.*

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**Key words:** Cassava, Value Chain, Women, Involvement, Activities.

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## Introduction

Women have an essential role in agricultural output and food security because they are primarily responsible for providing labor during the production, harvesting, and processing stages. Economic empowerment for women is critical to agricultural transformation (Otunba-Payne, 2020; AfDB, 2015). When it comes to other tasks, women handle almost 90% of the processing (African Development Bank, 2014). As a result, research on women's involvement in food sustainability is crucial.

Cassava is a tuber crop that originated in South America and is now grown all over the world in tropical and subtropical climates. After rice, wheat, and sugarcane, cassava (*Manihot spp.*) is the fourth most important crop for tropics farmers, with up to a billion people worldwide eating it (FAOSTAT, 2010). Cassava can be used to make fufu, gari, flour, tapioca, animal feed, ethanol, starch, gum, and glucose, among other things. Its roots are consumed as food, given to livestock, or used to make starch (Eguono, 2015). Vitamins, minerals, and proteins are all found in the leaves. It has a remarkable ability to adapt to climate change, with poor soil fertility tolerance, drought resistance, pest disease resistance, and the ability to store its roots underground for lengthy periods of time even as they mature (Angba and Iton, 2020).

Cassava is Africa's most important crop in terms of production weight and value, and it has a similar calorie content to rice. Africa produces approximately 54% of the world's cassava, with Nigeria leading the way with a production of 54.8 million metric tons in 2014. (FAO, 2014). Cassava is farmed in all of Nigeria's agro-ecological zones, but it grows best in the rainforest and derived savannah. The North-Central and South-South regions produce the most (Sahel Capital, 2014). Cassava is one of the most significant crops for farmers in Nigeria; it is the most extensively farmed crop, providing food and revenue to more than 30 million farmers as well as a big number of processors and traders (Agada, Onuche and Mbah, 2018).

Cassava has evolved from a low-yielding famine reserve crop to a high-yielding cash crop, and it is currently Nigeria's most widely farmed crop (Apata, 2019). Cassava is a vital staple crop in Nigeria, with average annual consumption exceeding 300 kilograms per person in some areas. Most Nigerians consume it as a dietary carbohydrate staple, bridging cultural and societal barriers. Women in Nigeria perform the majority of the labor connected with cassava production and processing. As a result, cassava is sometimes referred to as a "women's crop".

The value chain of a product describes the entire set of operations required to bring a product or service from conception to end consumer, including the various parties engaged in production, processing, and delivery (Adekunle et al., 2012; Henri-Ukoha and Ikpe, 2018). A well-functioning value chain enables industrial operations to be properly linked to market demand and supply (Henri-Ukoha et al., 2015). Cassava value encompasses all processes from harvest through consumption, as well as everything in between.

Successful and efficient value chains, according to Otunba-Payne (2020), play a crucial role in poverty reduction in Africa. The female small-scale farmer is the backbone of the cassava value chain in Nigeria. Despite the fact that males are usually more active in cash-crop activities, which provides them with a larger income (Sell & Minot, 2018), the cassava value chain in Nigeria is predominantly constructed on women's labor for both farm-level production and value addition.

According to Otunba-Payne (2020), female labor-force participation percentages in Sub-Saharan Africa (SSA) are fairly high when compared to the rest of the globe, and the average agricultural labor-force participation rate in SSA is the highest in the world. Women account for 43% of all agricultural laborers worldwide, and they are principally responsible for crop and livestock production at both the subsistence and commercial levels (Otunba-Payne, 2020). Women in Nigeria offer a significant proportion of agricultural labor; they work as self-employed farmers, unpaid employees on family farms, and paid and unpaid laborers on other farms and agrarian organizations (FAO, 2011). Women's participation in cash crop production has expanded dramatically in recent years, with 22 percent of female-led families and 25% of male-led households participating in cash crop production (Oseni et al., 2013a).

From the above, this research focused on finding answers to the following questions:

1. what are the major value chain activities in the study area?;
2. what are the value chain activities participated by women in the area?;
3. what are the constraints affecting effective involvement of women in cassava value chain in the area?; and
4. what are possible suggestions to improve effective involvement of women in cassava value chain activities in the area.

## **Objectives**

The broad objective of this research was to investigate women's involvement in cassava value chain activities in Akpabuyo LGA of Cross River State, Nigeria. The specific objectives were to:

- i. identify the major value chain activities in the study area;
- ii. investigate the value chain activities participated by women in the area;
- iii. identify the constraints affecting effective involvement of women in cassava value chain in the area; and
- iv. evaluate possible suggestions to improve effective involvement of women in cassava value chain activities in the area.

## **Methodology**

This research was conducted in Akpabuyo Local government area of Cross River State, Nigeria. Akpabuyo is located in the Calabar agricultural zone, with its headquarters in Ikot Nakanda. Geographically, it is located between latitude 4<sup>0</sup>5"N and 5<sup>0</sup>4"S and longitude 8<sup>0</sup>25" W and 8<sup>0</sup>32"East of the equator. The LGA has a population of over 271,325 people (NPC, 2006). Important crops grown in the area include cassava, maize, cocoyam, kola nut, oil palm, etc. Dwellers in the area also engage in economic activities such as palm wine tapping, processing of oil palm, welding, petty trading, among others.

## **Sampling technique and sample size**

Multi-stage and purposive sampling techniques were adopted for this study. At stage one, simple random sampling was employed to select 6 communities out of the 22 communities in Akpabuyo local government area. The selected communities were Ikot Effio-Enang, Ikot Eneyo, Ikot Edem Odo, Ikot Nyanyan, Abakot Eneyo and Ayanganse. At the second stage, the list of cassava women association was obtained from each of the selected villages. The entire members of the association were purposive adopted for the study. This summed up to 216 women adopted for the study. However, on retrieval, 200 questionnaires were realized, which was used for the analysis.

Primary data on the relevant objectives of the research, collected through the use of structured questionnaires, was used for the study. the questionnaire was designed to elicit responses on the major value chain activities; value chain activities participated by women; the constraints affecting the involvement of women in cassava value chain; and the possible suggestions to boost the involvement of women in cassava value chain in the area.

Data gathered was sorted, coded, cleaned and analyzed using SPSS version 23 and percentages, frequency as well as weighted mean were used to report the findings.

## Results

### Major Cassava value chain activities in the study area

Table 1 presents the findings of the major cassava value chain activities in the study area. This section was measured on a four-point Likert type scale as Very High = 4; High = 3; Medium = 2; and Low = 1. As a result, the mean benchmark for decision is 2.5.

From the result, it was revealed that processing was the most active cassava value chain function carried out in the area, with a weighted mean of 3.07. This could mean that cassava processing is perceived to be more industrious than any other cassava value chain activity. Second to processing was marketing, with a mean of 2.92, meaning that cassava marketing is also perceived to be more valuable than production and packaging. The 3<sup>rd</sup> ranking value chain activity is production, with a mean of 2.87. By mean categorization, these three major activities were highly engaged in the area, as against packaging, with a mean of 1.86, indicating that this value chain activity was not highly engaged in the area. This could be because of inadequate packaging material, lack of experience or low patronage of such packaged products in the area. This result is similar to the findings of African Development Bank (2014).

**Table 1:** Frequency distribution of major cassava value chain activities

Activities	Very High	High	Medium	Low	SD	$\bar{x}$	Remark
Production	83	50	24	43	1.18	2.87	Very High
Processing	90	64	16	30	1.06	3.07	Very High
Packaging	10	36	70	84	0.89	1.86	Low
Marketing	84	40	52	24	1.07	2.92	Very High

Source: Field data, 2021

### Value Chain Activities Participated by Women in the Study Area

Table 2 presents the findings of the value chain activities participated by women in the study area. The frequency distribution of this finding revealed that women participated in cassava value chain activities such as production, processing, storage, wholesale, refining, packaging and retailing, at varying degrees. It was observed that women participate more in cassava processing ( $\bar{x}=1.94$ , rank=1<sup>st</sup>). This result corroborates with the findings in Table 1, indicating that women prefer to more in processing cassava over production, packaging, marketing, among others. Results in Table 2 revealed that production had mean of 1.85, and ranked 2<sup>nd</sup>. This made this value chain activity the second most participated activity by women in the study area. This was followed by wholesale, with mean of 1.78 and rank =3<sup>rd</sup>, making it the third most participated value chain activity by women in the area.

The findings revealed that the least most participated cassava value chain activity by women in the area is retailing. This could be because of inadequate retail market or because of low income generated from retailing. This finding aligns with the findings of Knipscheer *et al.* (2007).

**Table 2:** Frequency distribution of cassava value chain activities participated by women

Activities	Participated	Not Participated	SD	$\bar{x}$	Rank
Production	170	30	0.36	1.85	2 <sup>nd</sup>
Processing	188	12	0.23	1.94	1 <sup>st</sup>
Storage	80	120	0.49	1.40	5 <sup>th</sup>
Wholesale	155	45	0.42	1.78	3 <sup>rd</sup>
Refining	120	80	0.49	1.60	4 <sup>th</sup>
Packaging	80	120	0.49	1.40	5 <sup>th</sup>
Retailing	15	185	0.26	1.08	6 <sup>th</sup>

**Source:** Field data, 2021

### Constraints affecting effective involvement of women in cassava value chain activities

This section of the result presents the findings of the salient constraints affecting women's participation in cassava value chain activities in the study area. This was captured using 4 point Likert type scale, as Strongly Agreed=4; Agreed=3; Disagreed=2 and Strongly Disagreed=1. This resulted in a mean benchmark of 2.5.

Results in table 3 revealed that women identified critical factors influencing their participation in cassava value chain activities to include poor access to land; lack of financial support; transportation; lack of improved cassava cuttings; lack of herbicide; None involving of women in policy making; inadequate market linkage; and lack of adequate production and processing tools.

However, the mean distribution of these factors indicated that lack of adequate production and processing tools, with mean of 3.81, was the most critical factor constraining their effective participation in cassava value chain activities in the area. This was followed by poor access to land, with a mean of 3.78, making it the second most critical constrain to effective women involvement in cassava value chain activities in the study area. The third most critical constraint

affecting effective involvement of women in cassava value chain activities was identified to be lack of financial support, with a mean of 3.72.

On the other hand, lack of herbicides ( $x = 2.38$ ) and none involving of women in policy making (None involving of women in policy making= 3.06) were the lease critical constraints identified by the respondents.

**Table 3:** Mean distribution of constraints affecting the participation of women in cassava value chain activities

Constraints	Strongly Agreed	Agreed	Disagree	Strongly Disagree	SD	$\bar{x}$	Remark
Poor access to land	165	28	4	3	0.57	3.78	Critical
Lack of financial support	166	20	6	8	0.68	3.72	Critical
Transportation	108	56	20	16	0.98	3.28	Critical
Lack of improved cassava cuttings	90	50	40	20	1.14	3.05	Critical
Lack of herbicide	0	120	38	42	0.79	2.39	Critical
None involving of women in policy making	92	48	40	20	1.17	3.06	Critical
Inadequate market linkage	166	0	8	26	0.86	3.53	Critical
Lack of adequate production and processing tools	175	18	0	7	0.45	3.81	Critical

**Source:** Field data, 2021

### Suggested strategies to improve women involvement in cassava value chain activities in the study area

This section of the study expounded some strategies to improve effective women involvement in cassava value chain activities in the study area. This section was also measured using 4 point Likert type scale, as Strongly Agreed=4; Agreed=3; Disagreed=2 and Strongly Disagreed=1. This resulted in a mean benchmark of 2.5.

The result in Table 4 revealed that financial support, ease of transportation and access to improved cassava cuttings, with means of 3.79, 3.78 and 3.63, respective, ranked 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>. These were rated to be the three most important suggestions that would improve effective involvement of women in cassava value chain activities in the steed area. This could be because access to financial support will enable women to expand their base of value chain activities, acquire new and better equipment for effective processing, packaging, among others. Also, ease of transportation will help women to access better markets linkage and ease distribution process. Furthermore, access to improved cassava cuttings will avail women of timely and wholesome



cassava tubers, reduce production efforts and speed up value chain activities, therefore afford women time to engage in other important domestic activities. This findings is in line with the findings of Ahmadu and Idisi (2014).

**Table 4:** Mean distribution of suggestions to improve women participation in cassava value chain activities

<b>Suggestions</b>	<b>Strongly Agreed</b>	<b>Agreed</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>SD</b>	<b><math>\bar{x}</math></b>	<b>Rank</b>
Access to land	120	60	8	12	0.83	3.44	6 <sup>th</sup>
Financial support	170	20	7	3	0.58	3.79	1 <sup>st</sup>
Ease of transportation	170	20	6	4	0.59	3.78	2 <sup>nd</sup>
Access to improved cassava cuttings	160	16	14	10	0.82	3.63	3 <sup>rd</sup>
Access to herbicide	126	56	10	8	0.77	3.50	4 <sup>th</sup>
Involving of women in policy making	110	40	25	25	1.07	3.18	7 <sup>th</sup>
Adequate market linkage	80	60	22	38	1.13	2.91	8 <sup>th</sup>
Provision of adequate production and processing tools	140	30	10	20	0.98	3.45	5 <sup>th</sup>

**Source:** Field data, 2021

## Conclusion

It is clear from this research that women in Akpabuyo local government area are significant actors in the country's agricultural sector, particularly the cassava sub-sector, and as a result, food security. Based on the findings of this study, it was concluded that the women participate more in cassava processing, production and wholesale, in the study area. the critical factors the constrained women's effective participation were Lack of adequate production and processing tools, Poor access to land and lack of financial support.

Thus, the study recommended that value chain actors and promoters should make credit facilities available to women in order to encourage their effective involvement in cassava value chain activities in the area. Also, means of transportation of cassava products should be enhanced in order to lessen the burden and encourage their involvement in value chain activities.

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