



## SOURCES OF INFORMATION USED BY CASSAVA PROCESSORS IN DELTA STATE

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### ABSTRACT

The study investigated the various sources of information accessed by cassava processors in Delta State, Nigeria. The primary objective was to identify the main channels through which these processors receive information related to cassava processing. Data were gathered using a structured interview questionnaire administered to a purposive sample of 106 out of 349 cassava processors. Findings show that 92% of respondents rely on fellow cassava processors for information on processing technologies. Additionally, majority (82%, 70% and 62%) obtain information from extension agents, radio broadcasts, and family and friends, respectively. Other sources of information used by the respondents include neighbors (21%), television (14%), and friends (39%), while 10% cited an unclear source ("9"), 3% mentioned sales agents, and none reported using bulletins, pamphlets, or seminars. The study revealed that most cassava processors were women, with many being married and literate, and an average age of 34. However, a large proportion lacked cooperative membership, indicating low participation in support networks. The study indicates that cassava processors largely rely on informal and easily accessible sources—such as fellow processors, extension agents, and radio—for agricultural information. This highlights the significant role of social networks and mass media in disseminating knowledge within rural communities. However, the limited use of formal sources like newspapers, online platforms, and printed materials—which typically require literacy—points to educational constraints. Women constitute the majority of cassava processors, and while many are married and possess basic literacy, low participation in cooperatives limits their access to shared resources and support. These findings emphasize the need to strengthen extension services and implement inclusive, gender-sensitive, and education-focused policies that promote cooperative participation and enhance rural productivity.

**Keywords:** Cassava, Processors, Information, Sources, Extension, Services,

### INTRODUCTION:

Cassava serves as a vital source of dietary energy and is a major carbohydrate staple in many developing nations, including Nigeria. Nigeria stands as the world's largest producer of cassava, with an annual output exceeding 57 million tons (Adesopeet *et al.*, 2020; Srivestava *et al.*, 2023; FAO, 2017; Nnamdozie, 2015), significantly ahead of Brazil and Indonesia, which produce 25.3 million and 24 million tons, respectively. Despite this high production, cassava farming in Nigeria faces several challenges. Most farmers rely predominantly on organic fertilizers, which limits productivity. Furthermore, cassava cultivation and processing are largely subsistence-based, preventing commercialization and hindering Nigeria's ability to compete with other global cassava exporters (Ezedinma *et al.*, 2017). The fragmentation of smallholder farms across various locations also makes mechanization difficult.

Cassava flour, derived from cassava tubers, can be used as a substitute for wheat flour in the pastry industry. According to FAOSTAT (2017), cassava usage in Nigeria during the late 1990s was minimal compared to maize. However, increased recognition of cassava-based pastry products and a reduction in the cost of cassava-wheat flour composites could drive greater demand. Additionally, introducing mechanical and chemical processing methods to replace traditional, small-scale techniques would boost cassava output for industrial food use. Cassava starch is versatile and widely



used in confectioneries and industrial applications. It can be processed into dextrose, which is used in adhesives for items like envelopes, stamps, labels, and tapes. Moreover, cassava starch functions as a biodegradable polymer alternative to plastic in packaging. Sugars like fructose and glucose from cassava are suitable for jams and canned fruits, while cassava-based sweeteners are favored in beverages. Starch from cassava is also used in glue production—an essential component in making plywood—as well as in paper coating and sizing, enhancing print quality. Furthermore, cassava-derived ethanol has pharmaceutical applications and can serve as a biofuel alternative in developed countries. Therefore, increasing cassava yield—both at the smallholder and national levels—is critical to unlocking its full potential. Significant efforts are needed to enhance the knowledge and skills of cassava processors in their processing activities. The quantity and quality of information they receive play a crucial role in determining both the yield and overall quality of their products. As noted by Ajieh (2014), the generally low educational levels among processors can negatively affect their ability to access relevant information, adopt new technologies, and secure credit from formal financial institutions. This study was therefore undertaken (i) to examine the various sources of information utilized by cassava processors (ii) describe the socioeconomic characteristics of cassava processors. The aim of this study was to identify the different sources from which cassava processors in Delta State, Nigeria, obtain information.

## **METHODOLOGY**

### **The Study Area**

Delta State is situated in the South-South region of Nigeria, lying roughly between latitudes 5°00'N and 6°30'N and longitudes 5°00'E and 6°45'E. It spans an area of approximately 17,698 square kilometers, ranking it among the largest states in southern Nigeria by landmass. Based on figures from the 2006 National Population Census, the state's population stood at 4,098,391. Applying an annual growth rate of 2.6%, the estimated population for the year 2024 is around 6.58 million. The state enjoys a tropical climate, marked by a well-defined wet season from April to October and a dry season from November to March. Rainfall amounts range from 1,500 mm to 2,500 mm annually, with high humidity levels and temperatures generally fluctuating between 25°C and 32°C. Delta State's vegetation is varied, featuring mangrove and freshwater swamp forests in the southern areas, tropical rainforests in the central zones, and savannah vegetation toward the north. Occupationally, most respondents in the state, particularly those in rural communities, are engaged in activities such as farming, fishing, trading, and artisan work. Agriculture is the predominant source of livelihood, with key crops including cassava, yam, maize, plantain, and oil palm. Fishing is especially vital in coastal and riverine communities, while other residents earn a living through small-scale trading, skilled manual work, and employment in public service, especially in urban and semi-urban areas.

It shares borders with Edo and Ondo States to the northwest, Imo and Anambra States to the northeast, and Rivers and Bayelsa States to the southeast. To the south, it has a 160-kilometer stretch of coastline along the Bight of Benin. The state's terrain is predominantly flat, with no significant hills. The major ethnic groups in Delta State include the Urhobo, Itsekiri, Ijaw, Igbo, and Isoko peoples. According to the Delta State Ministry of Economic Planning (2008), the primary agricultural activities in the region are arable crop farming and fish farming.

### **Sampling Techniques and Sample Size:**

A purposive sampling method was employed to select four cells from each of the two agricultural zones in Delta State. The selected areas from Delta South were Warri North, Warri South, Patani, and Bomadi, while Udu, Okpe, Sapele, and Uvwie were chosen from Delta Central. From the total population of 349 cassava processors, a 30% sample was randomly selected, resulting in a total of 106 respondents who participated in the study.



**Table 1: Sample Composition**

S/N	LGA	No. of Cassava Processors (Garri)	No. Sampled (30%)	No. of Cassava Processors (Starch)	No. Sampled (30%)	No. of Cassava Processors (Floor)	No. Sampled (30%)
1	Warri North	28	9	7	3	8	2
2	Warri South West	26	8	6	3	9	2
3	Patani	25	7	5	3	6	1
4	Bomadi	27	8	5	2	6	2
5	Sapele	27	8	15	5	6	2
6	Okpe	28	9	15	5	8	3
7	Udu	26	8	14	3	4	1
8	Uvwie	27	8	16	2	5	2
	<b>Total</b>	<b>214</b>	<b>65</b>	<b>83</b>	<b>26</b>	<b>52</b>	<b>15</b>

*Grand Total Sample* = 65 + 26 + 15 = 106

**Source:** Department of crop processing, ADP Office, Asaba, Delta State.

### Method of Data Collection

Data were collected through the use of interview schedule, which was used to collect primary data.

### Method of Data Analysis

Data were analyzed using descriptive statistics such as frequency distribution, mean and percentage.

## RESULTS AND DISCUSSION

### Sources of Information on Cassava Processing Technologies

#### Respondents' Sources of Information:

This section discusses the various sources from which respondents obtained information on cassava processing technologies. Table 2 presents the distribution of respondents by their preferred sources. The results revealed that 92% of the respondents rely on fellow cassava processors for information. In addition, majority (82%, 70% and 62%) of the respondents receive information from extension agents, radio broadcasts and family and friends, respectively. Other sources include neighbors (21%), television (14%), friends (39%), an unspecified source labeled "9" (10%), and sales agents (3%). Notably, none of the respondents cited bulletins, pamphlets, or seminars as sources of information.

These findings implies that the most common source of information among cassava processors in the study area is interaction with fellow processors. This supports the findings of Dhehibiet *al.* (2020), who observed that farmers often rely on peers and personal experience for agricultural knowledge. However, depending heavily on fellow processors may not be ideal, as many still use outdated, traditional processing methods.

Extension agents were also identified as a key source of information. This aligns with the findings of Olajideet *al.* (2021), who reported that cassava processors frequently rely on extension agents, peers, seminars, radio, and friends. The significant use of extension services suggests that many processors are exposed to improved processing technologies. According to Tomokiet *al.* (2023), regular interaction with extension agents enhances farmers' awareness of innovations and promotes faster adoption, even in challenging environments.

Radio was another prominent source, consistent with the studies of Drafor (2016) and Fadipeet *al.* (2024), who highlighted radio as a major channel for disseminating agricultural information to cassava processors. Other sources included television, relatives, friends, neighbors, and sales agents, while only a few respondents reported using the internet and newspapers.

As indicated in Table 2, information sources that require higher literacy levels were less commonly used. This could be due to the limited educational background of many processors, which



restricts their ability to access more formal or written sources of information. Instead, they tend to rely on informal, easily accessible sources such as peers, family, radio, and neighbors. This reliance perpetuates the continued use of traditional cassava processing methods. Ovharhe (2020) also noted that low education levels limit access to information, adoption of new technologies, and access to formal credit. Similarly, Feyisa (2020) emphasized that education level is a key factor influencing the adoption of innovative practices.

**Table 2:** Distribution of Respondents according to Sources of Information

Information Sources	*Frequency	Percentage	Rank
Fellow cassava processors	194	92	1
Extension agents	173	82	2
Radio	147	70	3
Relatives	132	62	4
Neighbours	45	21	5
Television	31	14	6
Friends	29	39	7
Newspaper	21	10	8
Sales agents	19	9	9
Internet	6	3	10
Bulletin	0	0	0
Pamphlets	0	0	0
Seminars	0	0	0

*\*Multiple responses*

## **Socio-economic characteristics of cassava processors**

### **Sex of Respondents**

The findings showed that a large proportion (81.4%) of cassava processors were women, while men accounted for only 18.6%. This outcome supports recent research that identifies women as the primary actors in cassava processing within rural Nigerian communities, primarily due to their cus prioritize female processors by improving their access to funding, skills training, and related tasks (Eze & Nwankwo, 2023; Adebayo et al., 2022). As such, development initiatives aimed at enhancing productivity in this sector should initiate technologies.

### **Marital Status of Respondents**

Analysis indicated that 65.1% of participants were married, followed by 18.9% who were single, 10.4% who were widowed, and 5.0% who were divorced. The predominance of married individuals suggests a connection between marital commitment and participation in cassava processing. Okoro et al. (2021) noted that being married often entails increased household responsibilities, which can drive individuals to engage more actively in economic ventures such as cassava processing.

### **Educational Qualification of Respondents**

According to the data which could hinder their ability to embrace modern processing techniques (Ibrahim & Ajayi, 2022). Eniola and Yusuf (2023) stress that education plays a vital role in enabling access to innovations, agricultural extension, , 15.7% of the processors had no formal education, 51.9% completed primary education, 25.9% attained secondary education, and only 6.7% reached tertiary education. These figures reflect a generally low educational background among rural cassava processors, w and financial resources.

### **Age of Respondents**

The majority of respondents (44.3%) were within the 26–35 age range, with 22.6% aged between 16–25. Other age groups included 36–45 years (17.0%), 46–55 years (10.0%), and 56–65 years (10.3%). The average age was 34, indicating that most processors are youthful and within a productive age bracket. Chukwu and Edet (2024) argue that younger individuals are generally more responsive to new agricultural technologies and more likely to engage in agribusiness.



### Family Size of Respondents

A significant number of respondents (56.0%) reported having between 6–9 family members, with an average household size of 8. This supports the findings of Nwachukwu et al. (2021), who assert that larger households offer a critical labor force for family-run agricultural processing operations, minimizing the reliance on hired labor.

### Processing Experience

The study revealed that 36.8% of the respondents had been involved in cassava processing for 7–11 years, with the average experience around 10 years. This indicates a considerable level of practical knowledge among processors. Ezeanya and Duru (2023) pointed out that such experience enhances one's ability to adapt to new technologies and effectively manage processing-related risks.

### Membership in Cooperative Societies

Only 23.6% of the cassava processors were affiliated with cooperative societies, while 76.4% were not members. This limited involvement may restrict access to financial services, farm inputs, and extension support. Ojo and Aluko (2023) emphasize the strategic role that cooperatives play in promoting financial access, capacity building, and the diffusion of agricultural knowledge among rural processors.

**Table 3.** Socio-Economic Characteristics of Cassava Processors. (n=106).

Variables	Frequency	Percentage	Mean
<b>Sex</b>			
Male	20	18.6	
Female	86	81.4	
<b>Marital Status</b>			
Single	20	18.9	
Married	69	65.1	
Divorced	05	5.0	
Widowed	11	10.4	
<b>Level of Education</b>			
No formal	17	15.7	
Primary School	55	51.9	
Secondary School	27	25.9	
Tertiary	07	6.7	
<b>Age</b>			
15-24	24	22.6	
26-35	47	44.3	33.5
36-45	18	17.0	
46-55	11	10.4	
56-65	06	5.7	
<b>Processing Experience (Years)</b>			
2-6	22	20.8	
7-11	39	36.8	10.3
12-16	28	26.4	
17-21	10	9.4	
22-26	07	6.6	
<b>Membership of Cooperative</b>			
Yes	25	23.6	
No	81	76.4	
<b>Size of Family</b>			
2-5	19	18.0	
6-9	59	56.0	7.8
10-13	24	23.0	
14-17	03	2.8	





## CONCLUSION AND RECOMMENDATION

The study concluded that the major source of information for cassava processors in the study area was their fellow processor, extension workers, and radio programs. This trend highlights the crucial influence of both interpersonal networks and mass media in spreading agricultural knowledge within rural communities. Although the presence of extension agents suggests some level of access to modern processing technologies, heavy dependence on peer advice may restrict exposure to current and scientifically accurate practices. Additionally, the limited use of formal sources that require literacy—such as newspapers, online platforms, and printed materials—points to the challenge posed by low educational levels among many processors. This lack of education not only narrows the range of accessible information but also impedes the adoption of advanced cassava processing techniques. The socio-economic profile of cassava processors shows that women play a dominant role in processing, highlighting their importance in agriculture. A high percentage of married and literate respondents suggest family stability and basic education, which can support improved practices. However, the low cooperative membership (76.4%) indicates limited access to group support and resources. These findings call for targeted efforts to empower women, promote cooperative participation. Based on the study's findings, the following recommendations are proposed:

1. Extension services should be strengthened to ensure more efficient and impactful dissemination of information that can enhance the adoption of modern cassava processing technologies.
2. Cassava processors should be encouraged to become familiar with and utilize internet resources to access up-to-date and effective cassava processing techniques.
3. The government should regularly conduct seminars for cassava processors to provide comprehensive knowledge and training on improved processing technologies. This will help enhance their ability to produce higher-quality cassava products.
4. Informational materials such as pamphlets, bulletins, and publications that focus on improved cassava processing methods, value chains, and utilization should be made readily available to processors across Delta State.
5. Government agencies, NGOs, and agricultural extension services prioritize programs that empower women through access to credit, skills training, and modern processing technologies.
6. Efforts should also be made to encourage cassava processors to join cooperative societies by raising awareness of the benefits, such as improved access to inputs, training, and markets. Additionally, literacy and capacity-building initiatives should be strengthened to equip processors with the knowledge needed to adopt innovative practices and improve productivity.

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