

# Analysis of Production and Marketing Information Disseminated to Cassava Farmers in Meme, Southwest Region, Cameroon

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## Abstract

This study seeks to assess the production and marketing information disseminated by Agricultural Extension, examine the methods used in information dissemination and identify production and marketing constraints faced by cassava farmers in Meme Division, Southwest Region-Cameroon. A total of 92 farmers were administered questionnaires and interviews conducted with 10 agricultural extension agents. Data analysis revealed that production information were mostly on the period of land preparation and planting, improved cassava cuttings, weed control and pest/disease management. Marketing information were on available markets, market price, conservation techniques and processing. The most prominent method used in information dissemination was the group method (precisely general meetings, method/result demonstrations and seminars). The most observable production constraints were degradation of soil fertility, lack of access to land, climate change and long home to farm distances. The most conspicuous marketing constraints were price fluctuation, low purchasing power of consumers and high cost of transporting produce from farm to market. Extension plays its role of information dissemination on production and marketing to its clientele using mostly the group method. However, effective extension service delivery calls on active participation of all stakeholders to ensure attainment of extension's goal of increment in farm yields, income and living standard of farmers.

**Keywords:** Cassava farmer, Dissemination, Information, Production, Marketing

## I. Introduction

In many developing countries in the world, agricultural growth is very crucial for reduction of poverty since most of the people derive their livelihood from agricultural activities which include growing of crops and rearing of animals [1]. Cassava (*Manihotesculenta*), after rice and maize, is the third-most significant source of calories in Africa's tropical and subtropical regions [2]. It is an essential food security crop because the matured edible roots can be left in the ground for 36 months and it is important not only as food crop but also as a major source of income for rural household [3]. The crop plays an important role in ensuring food security because of its copious consumption in various forms by people and its ability to subsist and give appreciable yields on soils where many other crops may fail to perform[4]. It provides dietary energy for close to a billion people and livelihood for millions of farmers/processors traders

worldwide [5]. Production in Cameroon reached 6,093 million tons ranking Cameroon the 13<sup>th</sup> position in cassava production in Africa [6]. In Cameroon and the Southwest Region in particular, the crop is mostly cultivated by smallholder subsistence women farmers who often process it into appreciated recipes such as *garri*, *water-fufu*, *kum-kum*, *moyondo* consumable in the Region. Cassava has become a very popular crop and is fast replacing other staples like cocoyam and maize in the Region.

International Institute of Tropical Agriculture (IITA) is saddled with the responsibility of developing improved cassava varieties of short production cycle, high yield and pest/disease resistant. The call to increase yield, resilience, and nutritional value has again come to the fore as the demand for cassava is increasingly gaining momentum [7]. The responsibilities of educating and disseminating useful and timely information on improved production technologies and market outlets to boost production and income of small holder farmers is allotted to extension agency. However, there is paucity of knowledge on the production and marketing information disseminated by agricultural extension to cassava farmers in the study area and the methods of information delivery. Moreover, the production and marketing constraints faced by cassava farmers in Southwest region is poorly documented. This research therefore seeks to assess the production and marketing information disseminated by Agricultural Extension to cassava farmers, examine the methods used in information dissemination and identify the production and marketing constraints faced by cassava farmers in the study area.

## **II. Materials and Methods**

Meme is found on latitude 4° 50' 60" North of the Equator and longitude 9° 20' 60" East of the Greenwich Meridian of the Equator and falls in the Agro-ecological zone IV which is a humid forest zone with a mono-modal rainfall regime. The zone is dominated by tress (both agro-forestry and cash crop tress) with a little bit of grass vegetation. It records an annual rainfall of 2200mm and an average temperature of 31°C. The soil is clay, loamy and sandy in nature; suitable for the cultivation of crops like cocoa, corn, plantain, banana, cocoyam, yam, cassava, vegetables and fruit trees. Men, women and youths are engaged in agriculture even-though there is an observable feminine dominance in cassava production. The crop is cultivated in monoculture and mixed farming systems for subsistence and commercial purposes.

The population of the study was made up of 92 Cassava farmers affiliated to 6 registered Common Initiative Groups (CIG) and 10 agricultural extension workers in the study area. Since the population of cassava farmers was small, the total population sampling technique was used whereby the entire population becomes the sample size. Primary tools of data collection were questionnaires and interview guide. Data on production and marketing information disseminated by extension agency, methods used in extension service delivery and constraints faced by cassava farmers were all captured in the questionnaire. Interviews were conducted with extension agents on the subject matter and the responses used to corroborate data obtained from farmers. The collected data were analyzed using the Statistical Package for Social Science (SPSS) and Microsoft Excel.

## **III. Results and Discussions**

### **A. Production Information Disseminated to Cassava Farmers**

Production information received from extension is presented on Table I. All the farmers (100%) in the study received information on period of land preparation and planting, improved cuttings, weed control and pest/disease management. Information on finance for cassava production was received by 72.82% of the farmers. Information is vital in agriculture and accurate and timely information on when to plant, crop variety, pest/disease and weed management enhance agricultural production. [4] noted that the agricultural information sought by farmers are information on improved cassava varieties, planting method/spacing, weed control measures, fertilizer usage, disease control/prevention. These findings are

also corroborated by [8] who noted that production information provided by extension services to cassava farmers were on improved varieties, land clearing/preparation methods, type of pesticides/ herbicides, weeding techniques and linkage to credit sources.

Table I Type of Production Information Disseminated

Type of production information	Frequency	Percentage
Information on period of land preparation and planting	92	100
Information on improved cutting	92	100
Information on pest and disease management	92	100
Information on weed control	92	100
Information on finance for cassava production	67	72.82

**B. Marketing Information Disseminated to Cassava Farmers**

Extension provides information on available markets (97.8%), market price (94.6%), conservation techniques(96.7%) and processing (88.6%) as presented on Figure 1. Increase cassava production will only be meaningful if there is an efficient market system to ensure that food produced in the farm gets to the final consumers. Knowledge on available markets motivates production and decision to adopt good agricultural practices (GAP) and innovations. Cassava is perishable in its fresh state and conservation knowledge dwindle post-harvest losses. Processing into by-products like *garri*, *water-fufu* gives it additional value. Similar assertions were made in [1] where marketing information disseminated to cassava farmers were on marketing, processing and storage.

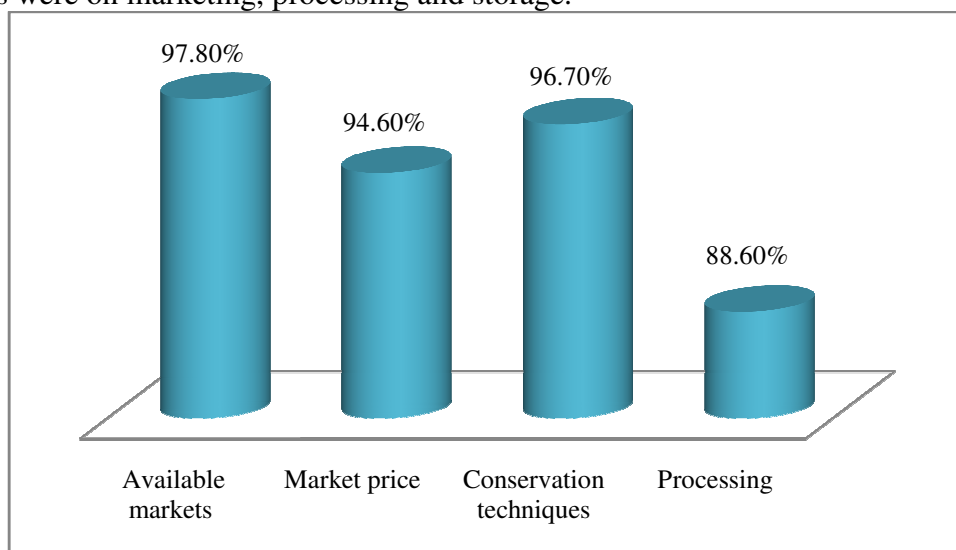


Figure 1: Marketing information disseminated to farmers

### C. Extension Methods used in Information Dissemination

Individual, group and mass media methods were used in information dissemination in the study area (Figure 2). However, among these methods, the group method was the most prominent consisting of general meetings (97.8%), method/result demonstrations (94.2%) and seminars (88.4%). Home/farm visit, (an individual teaching method) was reported by 89.1% of the farmers. Mass media methods like written material (23.9%) and Television/Radio programs (17.3%) were not very conspicuous teaching methods in the area. Interviews with extension agents corroborate farmers responses on method used in information delivery. According to the extension agents, it is easy to call for a general meeting to introduce a new cassava variety, announce agricultural calendar and disease/pest outbreak. Method demonstration permits the agent to show farmers how to prepare the land, arrange cuttings and apply other inputs like pesticide, herbicides without destroying the plant. Results demonstration are used by the extension agent as influencers especially when introducing a new cassava variety as they propagate change in the mentality of the farmers who compare their local variety farms with the result demonstration plots. Mass media methods (Television/radio and written materials) were scarcely used due to the high cost of TV/Radio programs and because most of the extension clientele were women with low level of education and could hardly read. This differs from the findings of [9] where mass media methods (especially the radio) were mostly used in information dissemination.

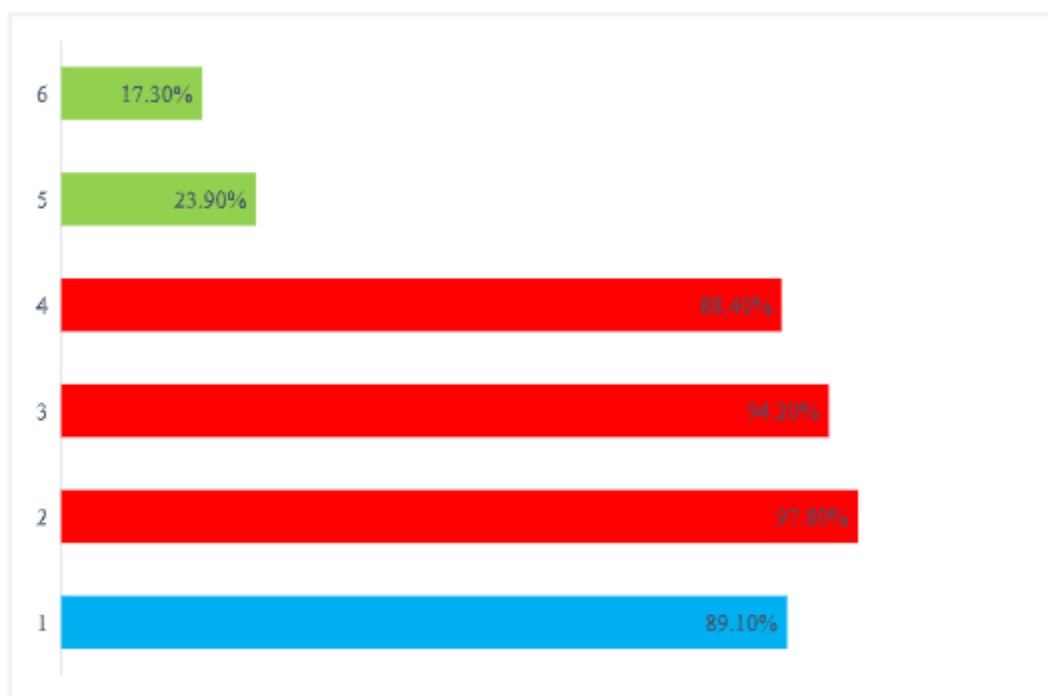


Figure 2: Extension methods used in information dissemination

### D. Production and Marketing Constraints Faced by Cassava Farmers

**1) Production Constraints:** The production constraints faced by farmers in the study are presented on Table II. Degradation of soil fertility was reported by 89.13% of the farmers. Urbanization as a result of population growth reduces agricultural land and farmers are constrained to cultivate the same farmland without allowing it to fallow thereby reducing its fertility. Lack of access to land was a constraint faced by 78.26% of the farmers. Women generally have lesser access to land than men since land acquisition is mostly by inheritance; a gender gap and constraint that greatly limit their agricultural productivity and

production. Women’s access to land is mostly through lease arrangements which are sometimes breached due to misunderstanding, jealousy and conflicts resulting in wastage of time and resources on the part of the lessee. Climate change was mentioned by 69.56% of the respondents. Climate is changing and altering planting calendars due to erratic start and end of the rainy and dry seasons. Long distance from homes to farms was the concern of 64.13% of the farmers. Farmers sometimes trek averagely 2 hours to the farm and get tired before commencement of work and effectively work only for few hours in order to return home before night fall. This greatly affects their productivity. Difficulties accessing financial institutions was a constraint faced by 56.52% of the farmers. Land is the most common collateral/assets of most farmers and the fact that most women don’t have this asset limits access to credits. Unavailability of planting material was indicated by 52.17% of the respondents. A period of dormancy is sometimes observed after land preparation because cassava cuttings are unavailable for planting. Pests and diseases were mentioned by 51.08% of the respondents who said that even after the use of pesticides and fungicide, some plants are still damaged by resistant pests/diseases. Destruction of cultivated cassava farmland (47.82%) for road construction purposes was equally aroused. [8] also identified inability to access credit, low soil fertility, scarcity of improved planting materials and post-harvest losses due to infestation by pest/rodents as constraints in cassava production.

**Table II: Production constraints faced by cassava farmers**

Production constraints	Frequency	Percentage
Degradation of soil fertility	82	89.13
Difficulties accessing finance	52	56.52
Climate change	64	69.56
Long distances from home to farm	59	64.13
Pests and diseases	47	51.08
Unavailability of planting material	48	52.17
Lack of access to land	72	78.26
Destruction of cultivated farmland	44	47.82

**2) Marketing Constraints:** Price fluctuation was a challenge faced by all the farmers (100%) as presented on Figure 3. Price is determined by supply of the good in the market. Low purchasing power of consumers was declared by 85.8% of farmers accentuating the stress and discontentment carrying their goods back home because consumers failed to buy even at give-away prices. High cost of transporting the bulky produce from farm to market due to the poor state of the roads was mentioned by 67.3% of the farmers. Middlemen exploitation was an observed constraint by 52.2% of the farmers. They reiterated that middlemen impose very low prices on the farmers when buying from farm-gates and sell at inflated prices to the consumers in the market. High perishability of cassava tubers (19.5%) in its fresh state increases post-harvest losses. This is in agreement with the findings of [10] who reported that cassava farmers are faced with high cost of transportation, poor and instable price of the product and inadequate storage facilities.

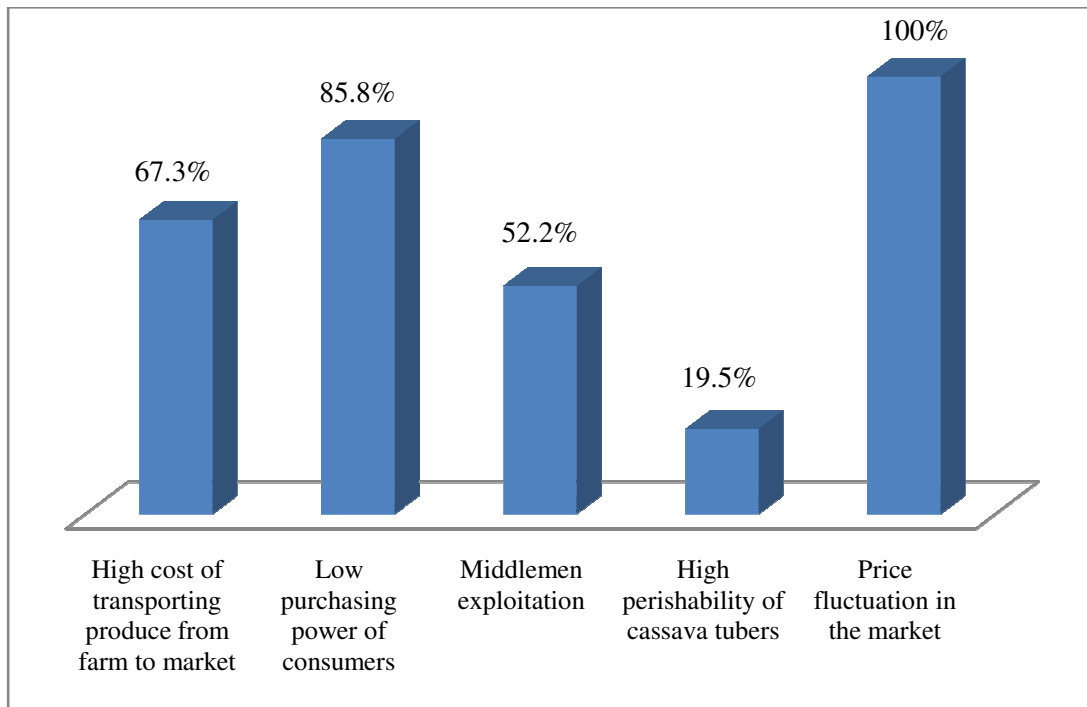


Figure3: Marketing Constraints Faced by Cassava Farmers

#### IV. Conclusion and Recommendation

Extension plays its role of dissemination of agricultural information on production and marketing to its clientele mostly by the group method to enhance assimilation of information. Degradation of soil fertility, lack of access to land, climate change, price fluctuation, low purchasing power of customers and high cost of transportation of produce from farm to market are the major production and marketing constraints in cassava production. Effective extension service delivery calls on active participation of all stakeholders to ensure attainment of extension's goal of increment in farm yields, income and living standard of the farm family.

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#### Conflict of interest

No competing interests exist.

#### Authors' contributions

This work was carried out in collaboration among all authors. Author DJT designed the study, performed the statistical analyses, wrote the protocol and the first draft of the manuscript. VKT managed the literature searches and edited the manuscript. Author MA collected the data of the study. All authors read and approved the final manuscript.

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