



Examining trends in the cultivation of some selected crops in rural areas of Momo Division, North West Cameroon

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Abstract

Agriculture accounts for a relatively large share of the Gross Domestic Product (GDP) of most sub-Saharan African countries. The sector is basically in the hands of rural masses, particularly the women who sometimes have to grapple with climatic stressors and a broken public agricultural extension service with productivity lagging behind in comparative terms. It is in this context that this paper sets out to assess trends in the cultivation of some selected crops by rural farmers drawing specific insights from Momo Division in the North West Region of Cameroon. The descriptive and analytical methods of investigation for secondary and primary data collection were adopted. Secondary data were sourced through a review of online materials, journal articles and books. Primary data were generated using questionnaire, interviews and focus group discussion guides and on-farm participant observations. The questionnaire was administered to rural farmers in the study area and the responses were input in excel spread sheet for processing. The findings indicate that oil palms (90.54%); cassava (90.54%); beans (63.23%); maize (60.86%); and sweet potatoes (57.63%); had an increasing trend of cultivation, while crops such as cocoyam (60.43%) and yams (61.29%) were experiencing a decreasing planting trend. The ease for post-harvest preservation, transforming and income generating potentials and suitability for local consumption explained choice of crops cultivated. Though much of the produce is commercialized, poor transport and transportation networks limited the market chains and returns from farm produce in the study area. In response to farmers' challenges, public efforts have to step-up activities of extension workers; improve on market chains and transportation.

Keywords: Crop cultivation, Trends, Consumption, commercialization, Momo Division.

Introduction

Sub-Saharan Africa according to studies by Muamba,¹ is the poorest region in the world. The average real per capita income in 2019 was \$1,585 with a 0.25% decline from 2018 that stood at \$1,589². There has equally been evidence of observed failures in growth over the years that have led to high levels of poverty in the region. The poverty trend remains compelling and overwhelming and has pushed a significant proportion of the youthful population across the Mediterranean in search of better opportunities in Europe. Muamba¹, further noted that the same picture of stagnation is observed at a glance of the structure of the economies as production is dominated by the primary sector in either agriculture or minerals extraction. They observed that the agricultural sector provides a relatively large share of the Gross Domestic Product (GDP) but productivity in the sector lagged considerably behind that of other continents and the potential that Africa can reach in the sector. This was further corroborated by Lobell *et al.*³ who noted that Sub-Saharan Africa (SSA) has ample opportunities to become the future breadbasket of the world but faced the challenge of crop yield gaps which they defined to be the difference between potential and actual crop yields. These observations should be noted have a close bearing to governance policies and the place of

autonomous institutions vested with the powers to ensure sustainable development in the continent. It is in this light that Tilman⁴, raised a worrying concern about the global debates of population growth and the welfare of the populations in Africa. Highlighted that the current world population growth and urbanization trends are shifting from Asia to Africa which may pose significant challenges on food production, human welfare and governance values. This global picture equally reflects the realities at sub regional levels as the situation becomes even dire when the case of some countries south of the Sahara is brought to the agricultural production table. According to UNDP Working Paper⁵ while agricultural growth has been the precursor to the acceleration of industrial growth in a number of emerging economies such as China, Brazil, and India, for sub-Saharan Africa, current agricultural productivity is low and there have been numerous failures in getting agriculture moving.

With a geometric population growth rate and a corresponding decline in food production, some countries in this sub-region have been termed "failed States" with exponential hunger indices reported to be the highest in the world and a corresponding high reliance on food import. This is in line with the 2019 Global Hunger Index (GHI) report⁶ which indicates

that hunger is highest in Africa South of the Sahara with countries such as Madagascar, Niger and Chad being moderate while Central African Republic seems alarming.

In Cameroon, the observed trends of production indicate a diminishing trend due to very little attention accorded to agriculture especially in the domain of food crops production where a large share has been entrusted in the hands of poor rural farmers who sometimes have to grapple with forces of nature to maintain production at some acceptable levels. Equally, the effects of both climatic and non-climatic stressors combined with a broken public extension service has placed thousands of this small-scale rural farmers at disproportionately high risk from a changing climate and human induced impact on the already degraded landscapes.

A significant proportion of the food in Cameroon is cultivated by small scale farmers at a sub-regional level in Momo Division of the Western Highlands of Cameroon whose livelihoods depends absolutely on farm incomes. In this case therefore, it suffices to raise some of the compelling questions that pre-occupy stakeholders in the agricultural sector in light of the ambitious government policy of emergence by 2035. Some of these questions include; what is the situation of food crop production in the rural areas of Momo Division? What is the current production trend and what relationship exist in the production, consumption and commercialization of these crops in the rural areas of Momo Division in view of ensuring food self-sufficiency, alleviating hunger and poverty and ensuring sustainable development? This paper is therefore aimed at analyzing trends in the cultivation of some selected crops by the rural farmers in this highland zone with the view of establishing a relationship between production, consumption and commercialization from where convincing policy options can be obtained for the government to buy-in and scale up production in order to optimized rural livelihoods in this sub region while curbing hunger and food insecurity at the national level.

The study area: Momo Division (Figure-1) is one of the seven divisions that make up the North West Region in the Western Highlands of Cameroon⁷. It is located between longitudes 9⁰58" and 28⁰02" East of the Greenwich meridian and latitudes 5⁰54" and 1⁰91" North of the equator. Relatively, the division shares its borders with Menchum Division in the North and Mezam in the East. It equally shares an extensive border with the South West Region covering the North West, West and the South West of the study area. It has a total land surface of 1792km² and a population of 138693 inhabitants⁸. This population depends absolutely on nature to give life a meaning through agriculture and the harvesting of Timber and Non-Timber forest products. The division is peopled by the Widikum tribe.

The physical and human presentation of the study area is varied. The relief of the area is characterized by highlands and lowlands. The highlands are predominantly mountains and hills, generally made up of steep slopes which often are less extensive

due to the numerous incised valley systems. Also, V-shaped valleys, deep and steep sided gorges and cascading waterfalls are common features⁹. The occurrence of mountains is sporadic in the whole of the division extending from the Bamenda fault scarp, Tugie, Oshie and the Menka axis. The lowlands are mainly river valleys and some flood plains. Just like the highlands, the lowlands are less extensive. Lowlands are common in Batibo and in Widikum which is an extension of the Manyu basin in the South West Region of Cameroon averaging some 198m above sea level. The altitudinal differential has influenced the floristic diversity of the area and therefore necessitating the cultivation of food, cash crops and livestock production which constitute the occupational landmark of the people.

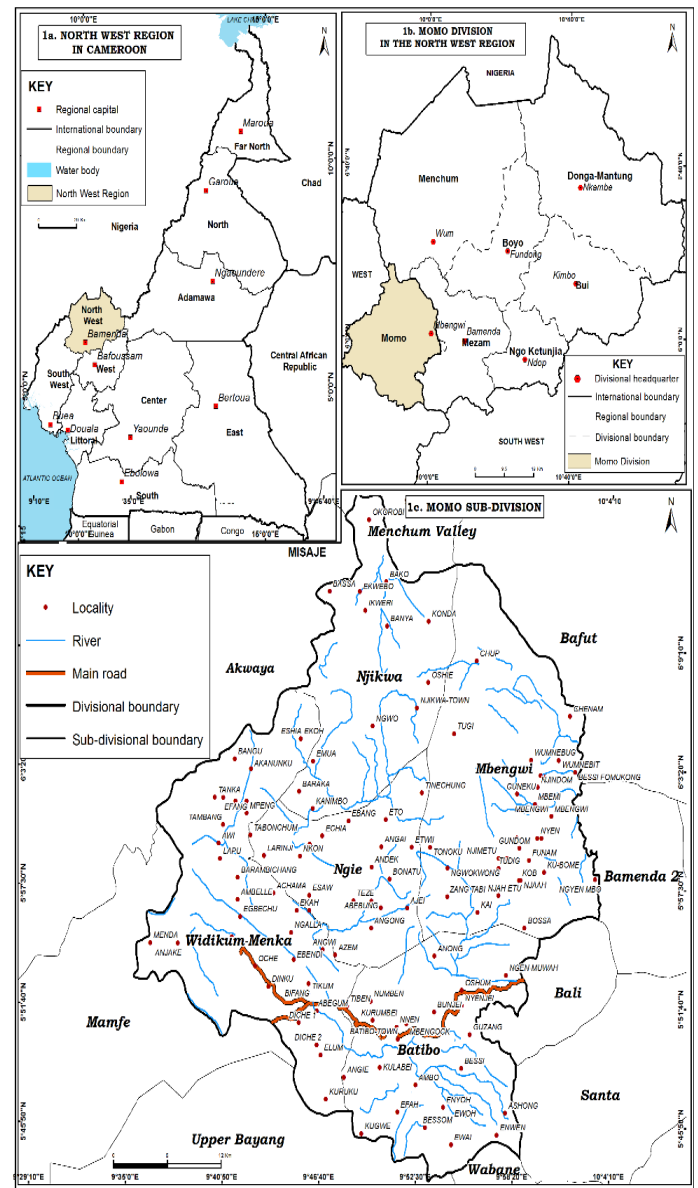


Figure-1: Location of Momo-Division in the North West Region of Cameroon¹⁰.

Materials and methods

This study was carried out in the rural areas of Momo-Division of the North West Region of Cameroon. The study focuses on the most commonly cultivated crops and staples cultivated by the rural farmers. The various crops brought under examination include; maize, beans, cocoyam, cassava, groundnut, plantains, oil palms, potatoes and yellow yam. The selection of these crops was premised on the fact that they are the most commonly cultivated in the study area. Oil palms though not a food crop was equally selected to represent part of the crops under investigation as it was noted to be widely cultivated by a cross section of the farmers. The researchers adopted both the descriptive and analytical methods of investigations. Vital primary data were generated using questionnaires, interviews with the aid of a guide, focused group discussions, field surveys and on-farm participation. The questionnaires were administered to the rural farmers in the study area and the responses were analyzed using excel spread sheet. Secondary data sources involved desk reviews, internet, journal articles and books. The narratives were presented in prose form and complimented by tables and figures.

Results and discussions

The agricultural sector in Cameroon has been highly neglected in policies and strategies to enhance production. This is premised on the fact that much of what is produced comes from small scale rural farmers who do not have the financial and material resources to afford conventional agricultural inputs such as fertilizers and hired labour for large scale production. This is further compounded by inadequate infrastructures like farm to market roads which are hardly maintained. The reasons for this could be traced back to the early 1980s especially after the Structural Adjustment Programmes (SAP), whereby the agricultural commodity board responsible for the development and maintenance of rural roads infrastructures in the country were dissolved and the private sector agencies which replaced this commodity board in the purchase of agricultural products still could not have adequate financing to embark on the construction of farm to market roads. Therefore, food production became narrowed just for the need of the farm family as the rural farmers could not expand production to accommodate externalities.

Within the past two decades in Cameroon, the changing trends in the economy of the country and the need for enhanced rural livelihoods and the desire by the rural populations to meet up with basic necessities has dramatically changed the narratives. This is in relation to results obtained in the field where it was revealed during interviews and focus group discussions that the burgeoning population of the study area is drastically mounting pressure on the farming populations for food needs and other basic necessities. The food produced was equally observed to be an activity carried by the poor especially women who have no other sources of income other than the reliance on farm

incomes. Equally, the farming population was noted to be small scale rural farmers who are not organized into cooperative societies. This was observed to be a major constraint in the acquisition of funding to increase production. In this case, some farmers reported that they only work through self-financing and as such can hardly afford enough to buy farm inputs that could permit them scale up production. As was noted in the field, the burning desire by the rural farmers to meet up with basic livelihoods needs and the education of their children, it was observed that a significant proportion of farm produce are meant for commercialization in the local markets from where they raise income to address family challenges.

These revelations necessitated the researchers to examine the trends in the planting of the selected crops under examination in the study area (Figure-2). In this case, it was noted that there has been a general increasing trend in the planting of these crops that were selected for examination. The results indicate that out of the nine (9) selected crop types brought under investigations, the planting trend of six (6) of the crops were observed to be on the rise. These include oil palms with 90.54%, cassava 90.54%, beans 63.23%, maize 60.86%, and sweet potatoes 57.63% (Figure-2).

From Figure-2, field investigations indicate that a significant proportion of the sampled household respondents are planting more and more of oil palms and cassava than the other crops brought under investigation. In an attempt to verify the reasons behind the observed increasing trends in the planting of oil palms and cassava, respondents noted that oil palm is the main cash crop that constitute the strength of the market force in the study area. From field interviews, it was reported that Momo Division is equally the main supplier of palm oil in the whole of the North West Region and specifically in the Widikum basin and therefore justify the reason why the crop is widely cultivated as it provides enough income to the farmers. Photo 1, indicate some seedling of palms in a nursery ready to be planted in the farm in Widikum.

From Figure-2, it is observed that cassava is equally widely cultivated. Field respondents reported that cassava is widely consumed and can easily be processed into different forms of consumables like *garri*, *water fufu*, *cassava flour*, *kum-kum*, *starched* amidst others which are less vulnerable to post harvest exigencies. It was noted that the various processed forms of cassava can as well be preserved for longer periods and therefore widens the distribution or the supply chain. This therefore accounted for the reasons many farmers are planting more of cassava as it is widely demanded and consumed by the population in the various local markets. Cassava was equally observed to be a crop that does well in almost all the ecological zones and does not require much labour and inputs. This therefore gave it an added advantage to be planted in both the savannah and forest ecological zones of the study area. These findings are linked to the views of Emmanuel¹², who noted that cassava is cultivated under a wide range of ecological

environments ranging from the humid, sub humid and to a lesser extent, the savannah areas. The crop enjoys an advantage over most root and tuber crops due to its adaptability to grow even in areas with low fertility. Equally, the International Food Policy Research Institute (IFPRI)¹³ noted that cassava is resistant to drought and it is relatively immune to damage by locusts. Nweke¹⁴ reported that cassava production has been successfully adapted into farming systems of Africa because of its all year round availability which acts as an insurance against crop

failure. Its low impact or resource requirements make it fully adapted to traditional farming and food systems in tropical countries and its relative ease of cultivation and processing both locally and industrially makes it a veritable instrument for poverty alleviation in both the rural and urban areas. Other reasons for the cultivation of cassava according to field interviews and focused group discussions, it was reported that the water derived from its fermentation process is used as a phytosanitary product in the treatment of fungi on plantains.

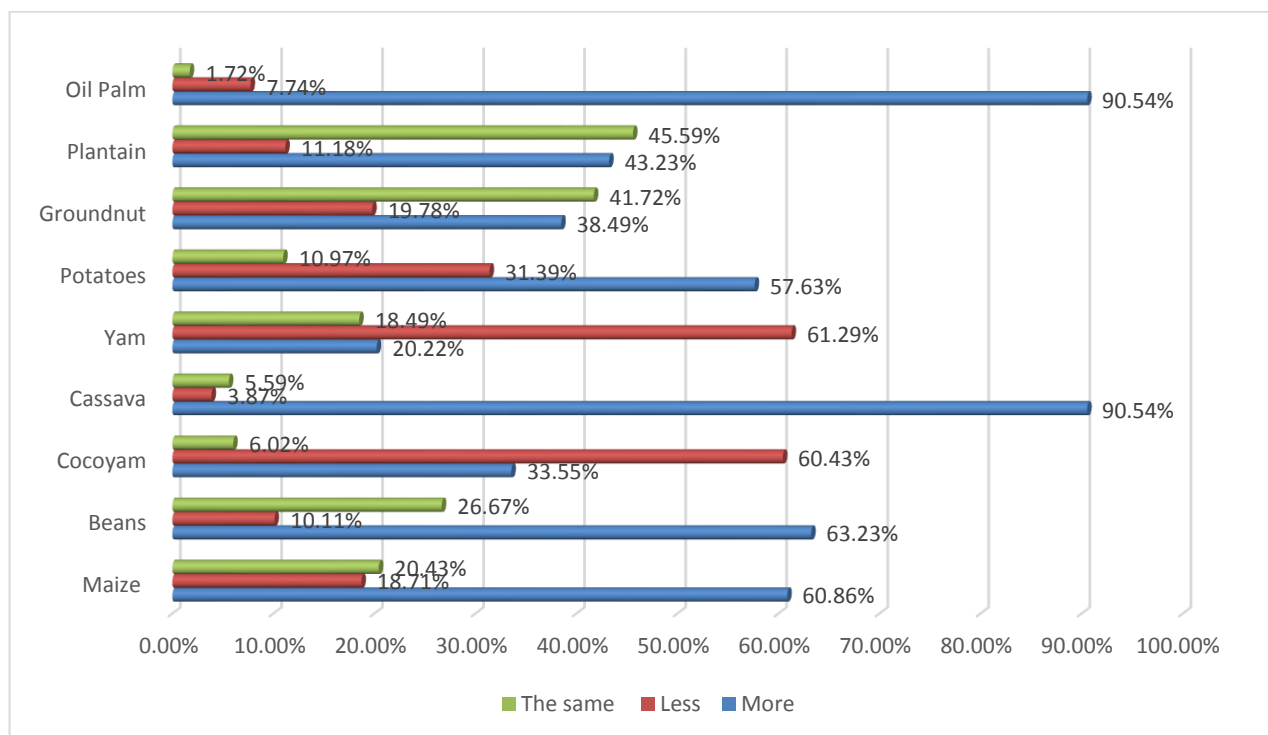


Figure-2: Current trends in the planting of selected crop types in the study area¹⁵.



Figure-3: Improved oil palm seedlings in a nursery ready to be planted in the farm in Widikum¹¹.

Other crops such as cocoyam 60.43% and yams 61.29% were observed to be experiencing a decreasing trend in cultivation. In an attempt to verify this observed decreasing trends, field respondents reported that more land is being cultivated for the planting of cassava and oil palms which have higher profit margins and therefore accounted for the reduction in land for the planting of cocoyam and yams. It was equally noted that cocoyam and yams do not have varied processed forms and cannot be transported over long distances coupled with their vulnerability to post harvest losses. As observed on Figure-1, it is noted that a significant proportion of the farming populations sampled still maintain the former planting trends for the other crops under investigation.

As concerns the cultivations of other crops especially cereals, the respondents complained that they are usually confronted with the problem of varying planting seasons due to climate variability. They noted that crops such as maize, beans, groundnuts and even vegetables that formerly used to be planted in the month of March with the approach of the first rains do not longer follow the normal planting cycle. Field respondents expressed worries that the planting of these crops in the month of March has led to great losses as the number of rainy days during this month are gradually reducing and very unreliable. They reported that when the first rains approach in March, they usually rush for planting and sometimes the rains may cease and the crops planted are scorched by the sun and the thirsty soils. In addition to this, and as noted by the respondents, some of the seeds that succeed to germinate are subsequently destroyed by black pest.

Therefore, in order to overcome the adverse effects of the intense sunlight that usually destroy the seeds when planted, some farmers reported that they usually soak the seeds before planting to ease germination and to prevent the intense heat from destroying the seeds in the soil. In some other areas, farmers reported that because of intense heat and sunlight due to the decreasing number of rainy days, they plant some resistant species of maize and beans without soaking in a bid to withstand such harsh weather conditions whenever the rains ceased.

Table-1 indicates data obtained from respondent's opinions on approximate production, consumption and commercialization of the crops cultivated in the study area. As indicated, it is observed that the production, consumption and the sale of these crops vary significantly based on the opinion of respondents. It is noticed, however, that much of what is produced is sold while only a small quantity is consumed as indicated on the bar charts (Figure-4). Table-1 equally indicates that the proceeds derived from the sale of these crops is not sufficient enough to raise the living standards of the local farmers as a majority of them receive low income from the sale of their produce.

The low income received by the farmers was reported to be due to poor accessibility as most of the roads are either footpaths or

earth roads which are hardly maintained for most parts of the year. As was noted, the deplorable state of the rural roads makes transportation to the urban markets difficult. In this case therefore, information gotten from interviews and focus group discussions indicates that most of the crops produced in the local villages are bought by middlemen who transport the crops to the urban markets through hired porters. The middlemen therefore take advantage of the poor accessibility of the study area to offer low prices for agricultural produce, a situation that does not help the farmers (Table-1). In the urban markets, these crops are sold at higher prices as a result of increase in the cost of transportation and the availability of a ready market for the crops.

Information from Figure-4, indicate that the most dominant crop produced in the study area is oil palms followed by maize, beans, cassava, cocoyam and plantain respectively. It is equally observed that much of what is produced is for sale while just a small proportion is consumed as observed on the bar charts. This goes to explain why a significant proportion of the sampled household respondents are desperately exploiting the natural resource base as a means to raise income for basic livelihood needs. However, it is equally noted that the planting trends of these crops do not reflect the production trends as it could have been assumed that cassava and oil palms should be leading in terms of production since they are the highest cultivated.

The variations in the cultivation and production trends depends significantly on the adoption of innovation, farm location, farmer's education and access to market. These were noted as major factors that determine production of a particular crop in the study area. The decrease observed in cassava production was noted to be based on the fact that most farmers in the study area still depend on the traditional species which do not yield higher outputs like the improved species of cassava. The low production was equally due to the degree of adoption of innovation by farmers as it was reported that agricultural extension agents are not in contact with a significant number of farmers in a large part of the study area to disseminate and educate the farmers on modern farming techniques.

It was however, observed that the production of these crops is mostly for commercial purposes than for subsistence as indicated by the fact that out of the total harvested, at least 77% of maize was meant for sale (Table-1). Trend lines indicate that sales increases on average by a gradient of 0.0714 with a higher constant value of 58.95 for all crops selected while consumption has been on a decreasing gradient of -0.0714 with a lower constant of 41.04 (Figure-5). This further goes to indicate that the main reason for crop cultivation is for commercial purposes than for subsistence except for two crops (yellow yam and plantains) where the reverse is the case as much of what is produced is rather consumed than for sale¹⁵. This trend explains why there is high pressure on the land for agricultural purposes which have led to serious land cover transformations and environmental degradation as the focus is on generating income

to meet up with livelihood needs and the education of children. With the commercial mindset of the population, transport and transportation infrastructures limit access to urban markets where they can fetch higher prices. These findings are in line with studies by Musa¹⁶ and Njukwe et al.¹⁷ who noted that marketing situation in Cameroon is confronted with a lot of deficiencies in the transportation domain as only a few good roads exist that links the urban areas while most farm to market

roads are largely unpaved and poorly maintained. It was equally observed that limited financial resources to invest in sustainable agricultural practices, has propelled the farmers to utilize whatever means at their disposal to bring the land under cultivation. As the land cover continue to decrease within the closed land frontiers amidst the growing population, feed backs have been observed through out-migration, conflicts over land especially at the resource frontier zones.

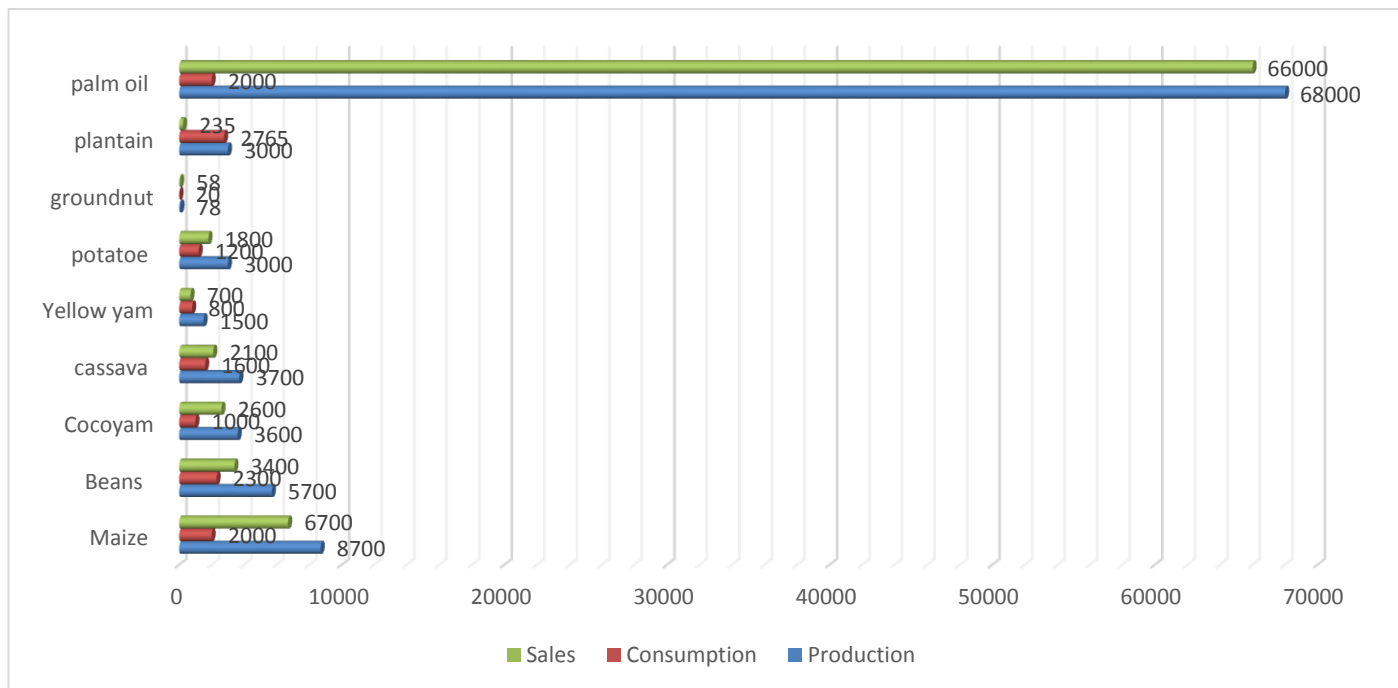


Figure-4: Trends of production, consumption and sale of selected crops in the study area¹⁵.

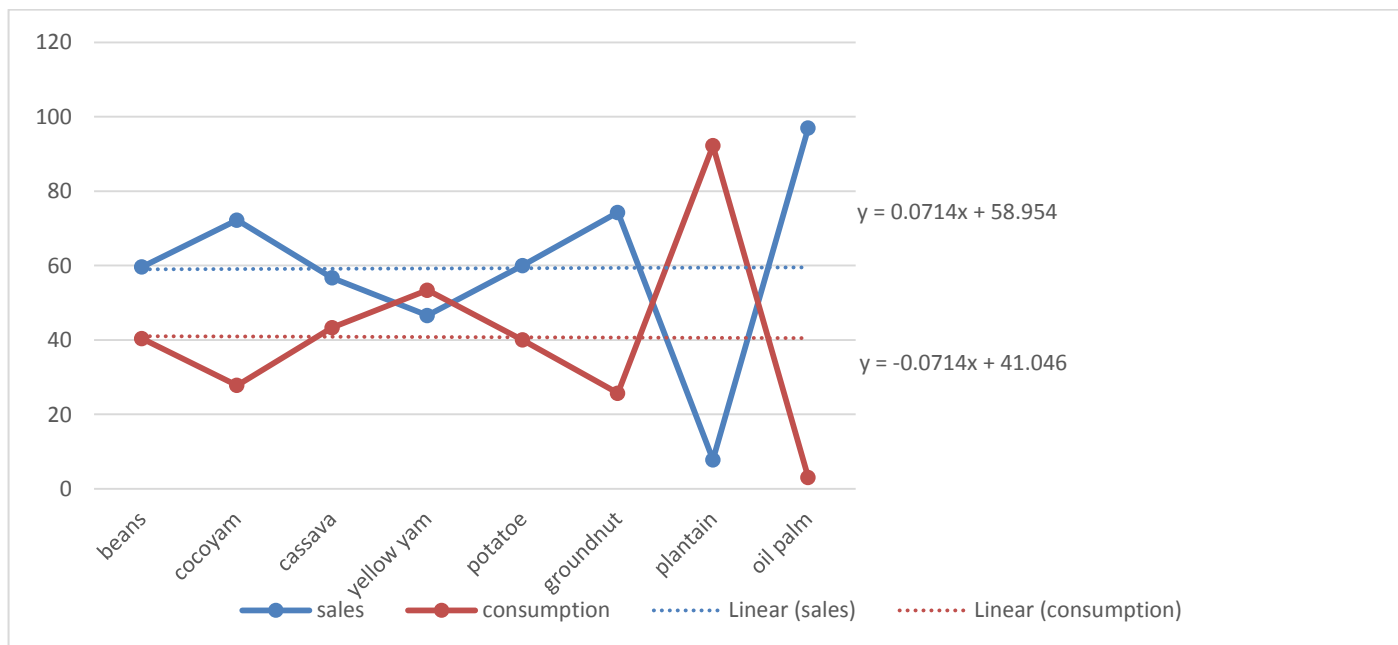


Figure-5: Sales and consumption trends of the selected crops under investigations in the study area¹⁵.

Table-1: Respondents opinion on farm output and prices of some selected crops in the study area¹⁵.

Crops types	Qnty harvested (tons)	Qnty consumed (tons)	Qnty sold (tons)	Measuring unit	Price range in FCFA	Number of Respondents	Percentage (%)
Maize	8700	2000	6700	15 liters bucket	>2000	279	60
					2100-4000	152	32.69
					4100-6000	34	7.31
Beans	5700	2300	3400	15 liters bucket	3000-6000	345	74.19
					6100-9000	87	18.71
					<9000	33	7.09
cocoyam	3600	1000	2600	20 liters bucket	>1000	398	85.59
					1100-2000	53	11.39
					2100-3000	14	3.01
cassava	3700	1600	2100	50 kg bag	1500-3000	407	87.53
					3100-4500	34	7.31
					<4500	24	5.16
Yellow yam	1500	800	700	20 liters bucket	2000-3000	421	90.54
					3100-4000	27	5.81
					<4000	17	3.66
Potatoes	3000	1200	1800	20 liters bucket	1000-1500	436	93.76
					1600-2000	29	6.34
					2100-2600	00	00
Groundnut	78	20	58	20 liters bucket	3000-6000	277	59.57
					6100-9000	144	30.97
					<9000	44	9.46
Plantain	3000	2765	235	Bunch	1500-3000	456	98.06
					3100-4500	9	1.94
					<4500	00	00
Palm oil	68000	2000	66000	30 liters container	8000-12000	368	79.14
					12100-16000	86	18.49
					<16000	11	2.37

Conclusion

Agriculture remains the bedrock on which most African countries will rely to achieve the much needed development of the continent. As illustrated in this paper, this sector has however not received the needed attention thus far. A large proportion of the population constituted of farm families spend long hours in the farm yet production levels cannot sustain their livelihood needs. They resort to commercializing a larger share of their total harvests yet they do not have direct access to the markets as they are confronted with the problem of bad farm to market roads. As such, their profit margins are greatly scaled down due to the influence of middlemen who have to form an interface between them and the urban markets. The scenario described herein is not different from what obtains in most African countries. The consequences of a persistent neglect of

the agricultural sector are manifold; it exposes the continent to food shortages and pulls the countries concerned into budget deficits as they are bound to embark on food importation. Also, infant industries find it difficult to fully take off when a country relies on food importation. This is in line with studies carried out by Adesina et al.¹⁸ who noted that Sub Saharan African countries depend on food import like meat, rice, and wheat for bakery products even in the wake of adverse international economic environment characterized by soaring import prices. In addition, when agriculture is not modernized, unsustainable farming practices are left to prosper which further plunge the soils into a state of infertility. Above all, with a broken agricultural system, development is retarded as a greater percentage of the farmers' efforts are geared towards satisfying the basic necessities of the family. Even with the little public effort put in the sector, the rural farmers in Momo Division have

proven their worth in terms of crops production such as palm oil, maize and others in the North West Region and Cameroon at large. This is a good indication that the government could scale in with the much needed support including the creation of a competent produce marketing board accompanied by the posting of agricultural extension workers and the amelioration of farm to market roads, this region could constitute a serious growth pole for the rest of the country.

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