

SMALL-SCALE FARMING SYSTEMS AND STAKEHOLDERS PARTICIPATION IN LIVELIHOOD SUSTENANCE IN FUNDONG SUB-DIVISION NORTH WEST REGION, CAMEROON.

BY

Nyamka Milton Kibebzii¹, Chiatoh Fabian Ntangti², Tsi Evaristus Angwafo¹, Bime Mary Juliet Egwu¹, Olivette Njang Wainkem³

¹Department of Agribusiness Technology, College of Technology, the University of Bamenda, P.O. Box 39, Cameroon,

²Catholic University of Cameroon (CATUC)

³Department of Geography and Planning, Faculty of Arts, The University of Bamenda

Corresponding email address: nyamkahlmilton@gmail.com



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Abstract

Small scale agriculture has become the back bone of most developing countries in the world especially Cameroon in general and Fundong Sub-Division in particular. Following the economic crisis of the early 1990s that hit Cameroon economy, there has been a steady increase in the rate of unemployment which has paved the way for agriculture to be the leading economic activity. This activity is creating employment to thousands of people in Fundong Sub-Division and contributing greatly to livelihood sustainability in Fundong. This study specifically examines small-scale farming systems and stakeholders involved in livelihood sustainability in Fundong the Sub-Division. The data was elicited via survey questionnaire administered to 104 respondents in 25 communities in Fundong. Using cluster-sampling approach, proximity villages were grouped into four clusters of villages and purposive sampling was used to select farmers to participate in the study. The objective of the study was achieved using descriptive statistics. The study reveals that small-scale agriculture is the dominant economic activity in the area, with various farming systems practiced, including mixed cropping, subsistence farming, and mixed forest farming. The findings show that maize and beans are the main crops produced, and that most farmers practice mixed cropping, with a significant proportion involved in vegetable gardening and tomato cultivation. The study also highlights the crucial role of small-scale agriculture in sustaining livelihoods among rural communities, providing income, food security, and employment opportunities. Effective stakeholder participation, including small-scale farmers, local communities, governments, NGOs, and private sector entities, are essential for promoting sustainable agricultural development and improving livelihoods. To address the complex challenges facing small-scale agriculture, there is need for a collaborative approach of stakeholders, and prioritizing livelihood sustenance. This can help promote sustainable agricultural development, reduce poverty, and improve food security in rural communities.

Keywords: Small Scale Farming systems, Stake holder participation, Livelihood Sustenance

1. Introduction

Small-scale farming systems are crucial for livelihood sustenance in many developing countries. These systems are characterized by small landholdings, limited access to resources, and a high dependence on family labor [1]. Despite these challenges, small-scale farmers produce a significant

proportion of the world's food, particularly in Africa and Asia [2]. Their farming systems are often diversified, with a mix of crops and livestock, which helps to spread risk and increase income. The livelihoods of small-scale farmers are heavily dependent on their farming systems. Farming provides not only food and income but also employment and a sense of security [3]. However, small-scale farmers face numerous



challenges, including climate change, soil degradation, and limited access to markets and credit [4]. To sustain their livelihoods, small-scale farmers require support in the form of training, credit, and market access, as well as policies that protect their rights and interests [5]. Small scale farming has been defined differently and also varies from country to country. According to Human Right and Emerging actors (HOPE, 2013) small scale agriculture refers to those farms of less than 2.0 hectares. Their production not only ensures household food security but also provides a livelihood for rural communities [6].

In Cameroon, the agricultural sector and related food processing activities account for about 50% of export earnings, contribute about 30% to the GDP and employ about 70% of the population. Agriculture is the main employment sector for the poor, employing 76.3% of the extreme and 60.7% of the moderate poor [7]. Most of this group tend to be subsistence or semi-subsistence oriented and face significant barriers to entering higher value agricultural activities. The agrarian population in Cameroon is made up of essentially small scale peasant farmers and their family members who make up about 70% of the agricultural population [8]. In the face of an increasing population and settlement, the use of farm inputs that are not environmentally sustainable, and wide-scale agricultural and forest land use changes food crop production trends seem to be uncertain or rather stagnant as studies reports that projected/expected needed crop production is often actual production. Fundong sub-division is a village in Boyo Division, North West Region of Cameroon. It is found between latitude 6°4' and 6°20' north and between longitude 10°11' and 10°30' East. The main driven economic activity in Fundong is small scale agriculture and other small businesses that sustain the lives of the population. Small scale agriculture production in Fundong is mostly carried out by peasant farmers who use poor farming techniques like the slash and burn method and shifting cultivation. Smallholder farmers in Fundong carry out both cash/food crop production. Some of these cash/foods that sustain small scale farmers' livelihood in the area include: coffee, kolanuts, plantains, bananas, coopeas, irish, beans, cocoayams/colocacia, garden eggs, vegetables, sugar cane, sweet potatoes and sweet potatoes. Small scale farmers in Fundong equally carry out the production of tree fruits such as mangoes, pears, guavas, plum and pawpaw to sustain their livelihood. Fundong sub-Division in the North West Region of Cameroon is not an exceptional case of small scale agriculture. Majority of farmers still carry out subsistence agriculture with poor farming techniques such as slash and burn, shifting cultivation. These are commonly practiced in small farm sizes of about 1 hectare of land. Small scale agriculture is the main activity of this rural area. It is being carried out in many forms such as subsistence agriculture, cattle rearing and opening of small poultry farms for the rearing of table birds. These helps to improve and enhance the livelihood of the peasant farmers in this area.

Purpose of the Study

The Main Research Question is:

- ❖ How does the different farming systems, and stakeholders participate in livelihood sustenance in Fundong sub-division?

The Main Objective of the Study is to:

- ❖ Identify the different small-scale farming systems and stakeholders involved in livelihood sustenance in Fundong Sub-Division

2. Literature Review

Mutero *et al.* (2016) also claimed that smallholder farmers can be the driving force behind rural development which is equitable, sustainable and productive [9]. Altieri *et al.* (2012) claimed that small scale agricultural production is a contributor to national food security [10]. Smallholder farmers should be treated as entrepreneurs, as farming practiced at whatever scale is a business [11]. However, some have argued that changes in farming practices can have negative ecological effects due to increase in fertilizers and pesticide use [12]. The effects of these chemical inputs on larger farm sizes is detrimental on the environment.

According to Fan *et al.* (2013), worldwide, there are about 500 million farms which are run by smallholder farmers. FAO (2011) reports that small farms produce an estimated 80 percent of the developing world's food [13]. Stats (2011) reported that there are 2.9 million agricultural households in South Africa, of which the majority are smallholder farmers [14]. (Kotze & Rose (2015) reported that there are 2 million smallholder farmers in South Africa [15]. Despite this, smallholder farming in developing countries is a force to reckon with, as it is the main source of employment, income, food security, as well as a source of food security in rural communities [16]. Smallholder farmers continue to be plagued by poverty and hunger. Globally, there are nearly 500 million smallholder farmers [17]. Often, the term is used to refer to any farmer who is not large scale and/or not very financially well off. When it comes to understanding who is contributing to the global food supply, distinguishing between different scales and segments of "small-scale" becomes exceptionally important [18]. There are about 570 million small farms in the world [19].

3. Material and Methods

The data used in this study were obtained from the survey questionnaire administered to 104 respondents in 25 communities in Fundong sub Division. A purposive sampling method was used to select farmers to participate in the study. This method was chosen to avoid bias estimate and the problem of simultaneity. Using cluster- sampling approach, proximity villages were grouped into four clusters of villages and purposive sampling was used to select farmers to participate in the study. Table1 summarizes the target population

N	Villages	Clusters	HH (Villages)	Total HH cluster	4% size	Total sample size	Eff. Resp	Total Eff. Resp	% of eff. Resp
1	Mbengkas	Western cluster	111	474	4	22	3	15	75
2	Baiso		48		2		2		100
3	Mbongkesu		88		3		2		66.7
4	Aboh		87		3		2		66.7
5	Mentang		242		10		6		60
6	Abuh	Eastern cluster	533	1981	21	78	11	36	52
7	Muteff		159		7		4		57
8	Mboh		94		4		2		50
9	Aduke		265		10		6		60
10	Achain		302		12		5		42
11	Ajung		233		10		4		40
12	Akeh		151		14		5		36
13	Ilung	Northern cluster	115	816	5	39	3	28	60
14	Mbissi		242		10		6		60
15	Meli		52		2		2		100
16	Fundong-up		132		5		3		60
17	Ngwainkuma		71		3		3		100
18	Bolem		153		6		4		66.7
19	Ngwah		193		7		4		57
20	Atoini		151		6		3		50
21	Mbam	Southern cluster	271	976	10	38	5	25	50
22	Alim		216		9		5		55.5
23	Boyui		115		5		3		60
24	Laikom		159		6		4		66.7
25	Fujua		212		8		6		
TOTALS			4247	4247	170	170	104	104	82.4

Table 1: The population of the study area and effective respondents

Source: BUCREP (National census 2005) and field surveys, 2024

From the total number of households, a 4% sample size household was selected. This 4% sample size gave 170 households to which questionnaires were to be administered. This sample helped the researcher to know the total number of questionnaire to be taken to the field for effective administration. Figure 1 shows the spatial distribution of effective respondents in the four village clusters

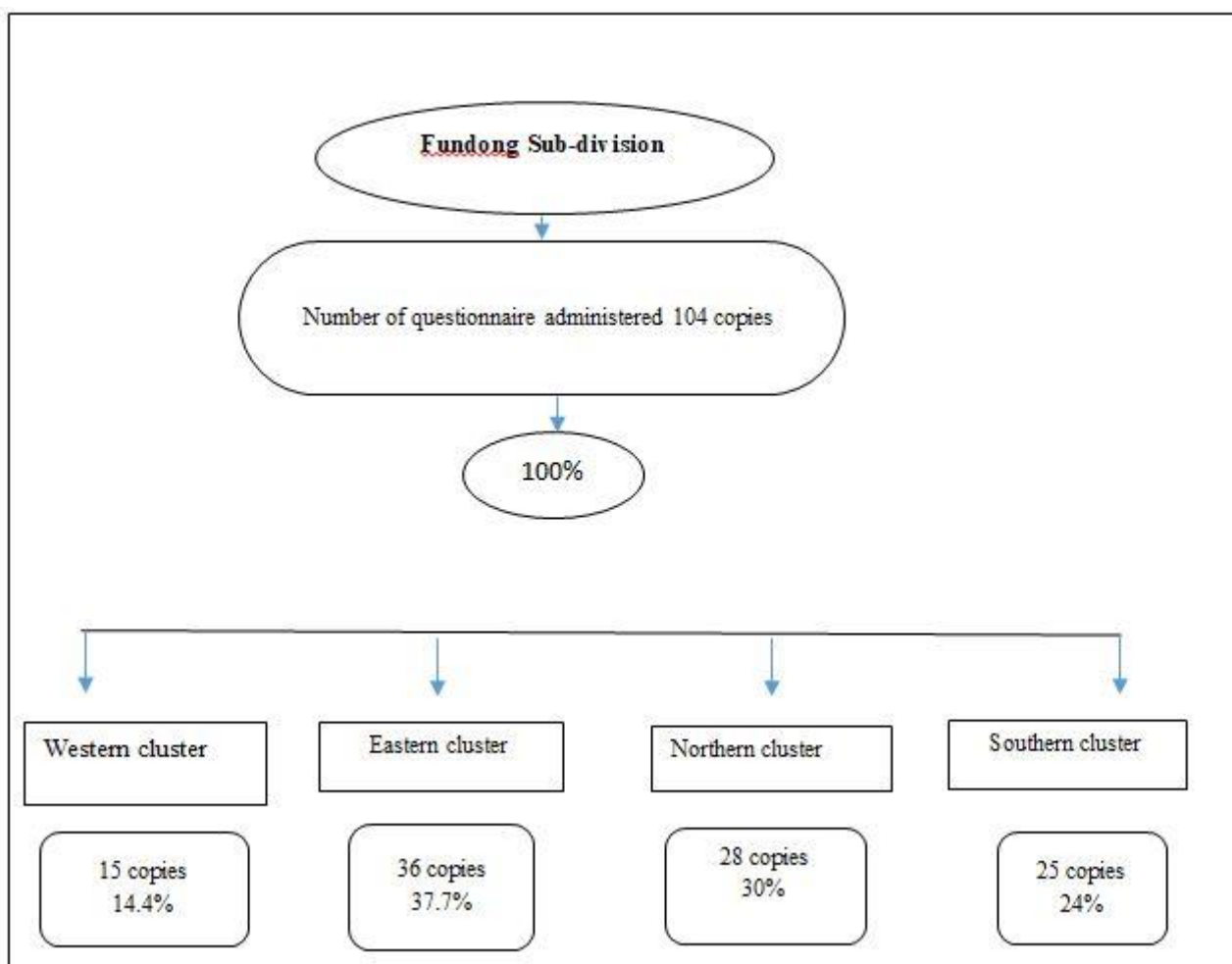


Figure 1: Spatial distribution of effective respondents in the four village clusters

Source: Drawn from table 1

4. RESULTS

3.1 Farming Systems

A Farming system is a mix of farm enterprises such as crops, livestock, aquaculture, agroforestry and fruits crops to which farm families allocate its resources in order to efficiently manage the existing environment for the attainment of the family goal [20]. The farming systems in this area include “mixed cropping, subsistence farming and mixed forest farming. So many crop types and different farming systems are carried out in Fundong. From the data collected from the field through questionnaires and interview guide, one can say with confidence that Small scale agriculture is the dominant live hood economic activity in Fundong Sub-division. The findings show the various crop types cultivated in this area such Maize, beans, cassava potatoes and other cash crops such as coffee. From the findings, it was revealed that maize and beans are the main crops produced in Fundong Sub-Dvision. These two crops are mostly produced twice a year during the rainy and dry seasons though some farmers even cultivate these same crops thrice a year. Most farming takes place during the rainy season where intensive farming takes place around December to March when planting process takes place. During this time, mostly corn is cultivated in large quantities as compare to beans and other crops. On the other

hand, beans is mostly cultivated during dry season in large quantities is mostly carried out in villages like Abuh Bongkisu, Ilung and Gwah. The farming of beans during the dry season starts around June and ends with harvesting in December. The agriculture output is being sold in Fundong main market while some is being transport to nearby villages and towns such as Njinikom, Belo and Bamenda town. Table 2 summarizes the crop types and farming systems. Other crops types such as cassava, yams and Irish potatoes are equally cultivated in this area. There is also the cultivation of some fruits in this area such as oranges, pawpaw and mangoes. The type of farming system commonly practice in Fundong is intensive farming system which involves the commercial production of large quantities of crops and livestock on small farms.

Table 2. Periodicity of crop types and Farming systems in Fundong Sub-Division

Periods	Crop types	F	%
Once/year	Maize and beans	32	30.8
Twice/year	Mixed maize, beans and potatoes	64	61.5

Thrice/year	Tomatoes, green spice gardens	4	3.8
None	Vegetable gardens	4	3.8
Total		104	100.0

Source: Fieldwork, 2024

From the table 2 above beans and maize is seen as one of the main crop types produced in Fundong Sub division. From the table, it can be seen that 30.8% of the population identified to plant corn and maize once a year, 61.5% of the population agreed to planting maize and beans twice a year. Thereby concluding that most farmers practice two years' rotation crop farming system. On the other hand, 3.8% of the population indicated they do not cultivate maize and beans. The results show that the greatest majority of the population that is 61.5% of the population plant maize and beans twice a year with a cumulative percentage of 92.3% of the population agreeing to this.

Spatial variation of Farming systems in Fundong

Agricultural farming systems come when necessary. Over the years, many factors have changed farming systems in Fundong. These factors include; Available water, land, grazing areas, arable lands, forest; climate, landscape etc. These are the dominant pattern of farm activities and household livelihoods. These include field crops, livestock, trees and aquaculture. Also, hunting and gathering, processing and off-farm activities are of great concern. The main technologies used, determines the intensity of production and integration of crops, livestock and other activities. Some of the farming systems practice Fundong Sub-Division include; Arable farming, Mixed farming, Subsistence farming, Shifting Cultivation, Pastoral/Livestock farming and Nomadic farming. Arable farming system in this area is a system of farming where the farmer grows only crops. Crops they produces here include annual crops like vegetables, plantain, cassava, grains and legumes. The farmers practice this system on a very small scale. Mixed farming is an agricultural farming system where the farmer grows crops and raise animals at the same time on the same piece of land. He grows different crops with different maturity periods at the same time. There is continuous cropping the whole season. This practice is possible in areas with good rainfall or irrigation facilities.

With subsistence farming, the farmer produces food for himself and his family. Farming is usually done on small landholding with simple farm tools. People usually think the farmers in this system are poor. They do not use fertilizers and improved seeds as much as they should. Productivity is usually low. Moreover, electricity and irrigation are mostly not available to them. The farmers and their household use most of the food they produce. Shifting Cultivation is equally

a farming system that is been carried out by farmers in Fundong. With this system, the farmer clears a piece of forest land. He fells and burns the vegetation residue including the tree trunks and branches. Then, he uses that piece of land to grow crops for three to five years. The land loses its fertility. Then the farmer leaves to allow the land time to regain its fertility. That period is the fallow period. He moves with his household to a new area to farm on new fertile land. He repeats the process. And, the farmer may come back to cultivate former lands after it has regained its fertility.

Villages	Cluster name/Zone	Agricultural systems	Crop type
Mbengkas	Western cluster/zone	Mixed farming	Maize,beans
Baiso		Shifting Cultivation	Cassava,potatoes
Mbongkesu		Nomadic farming	Cattles,sheeps
Aboh			Soya beans
Mentang			
Abuh	Eastern cluster/ zone	Mixed farming	Beans,maize
Muteff		Shifting Cultivation	cocoa yams
Mboh		Mixed forest farming	Bananas, pears
Aduke			
Achain			
Ajung			
Akeh			
Baichu	Northern cluster/ zone	Arable farming	Maize
Mbissi		Mixed farming	Maize, beans
Meli		Subsistence farming	cassava, cocoa yams, potatoes
Fundong-up		Vegetable gardening.	Greenspices, carrots, tomatoes
Ngwainkuma			
Bolem			
Ngwah			
Atoini			
Mbam	Southern cluster/ zone	Mixed farming	Maize, beans
Alim		Arable farming	
Boyui		Shifting Cultivation	cassava
Laikom		Vegetable gardening.	green spices, carrots
Fujua			

Table 3: Spatial variation of Farming systems in Fundong

The table above show the spatial variation of farming systems in Fundong Sub-Division. These farming systems are classified according to the various zones or cluster consisting of the 25 sub-villages which made up the population of the study area in Fundong. The 25 sub-villages which made up the study area was divided into four main clusters or zones with each zone showing the agricultural systems and crop types. From the study the two main farming systems are common in this area. The farming systems are mixed farming system and arable farming. The different zones produce different kinds of crops though they have common crops that they produce in almost all the zones such as maize, beans and vegetables. In areas such as Abuh, Muteff and Mboh beans is been produced in very large quantities. Areas such as Aboh, Baiso, Mbongkesu and Mbengkas produce maize in large quantity. Vegetables gardening is mostly practice in areas such as meli, Fujua, Mbam, Ngwiankuma and Atoini.

A. Mixed cropping systems

Mixed cropping as observed has been a common farming type practiced by majority of the population in this area. Mixed crop faming here has been a situation whereby farmers of this area cultivated so many different crops on the same farmland. A single farmland has like 5 to 7 different crops. Some of the crops commonly cultivated on the same piece of land include: corn, beans, soya beans, potatoes. yams, cassavas and groundnuts. The cultivation of these crops is mostly carried twice a year with exception of other few crops such as cassava that extend to even up to three years. Farmers in some of these areas such as Ilung, Meli, Baichu and Aduk do practice mixed crop farming because some of the crops helps them in so many ways for example one of the farmers said they like mixed cassava, maize, beans and other crops on the same farmland because they helped to effectively utilize the soil and more than one crop can be harvested at a time thereby promoting the proper growth of other crops and hence high output or increase yield stability. The study also revealed that mixed cropping as seen on figure 1 is important and advantageous to practice because the pest infestation is minimized and reduction in the risk of crop failure thereby insuring food security. Mixed cropping enhances farmers’ livelihood through high produce and hence encourage more mixed crop production (Figure 2).

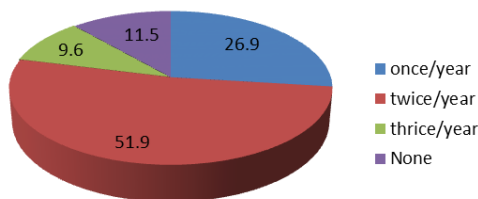


Figure 2: Periodicity of mixed cropping system of maize/beans and potatoes per year in Fundong Sub-Division.

Source: Fieldwork, 2024

In relation to mixed maize/beans and potatoes farms, 26.9% (28) of the population indicated that they plant such farms once in a year, 51.9% (54) of the population indicated that they plant such farms twice in a year while 9.6% (10) of the population indicated that they plant such farms thrice a year. The results further go to say that 11.5% (12) of the population indicated that they do not have mixed maize/beans and potatoes farms. This leads to the conclusion that a majority of the population is involved in mixed maize/beans and potatoes farms twice a year indicated by 51.9% (54) valid and a cumulative percentage of 78.8%.

Perception of cassava soya beans and coffee

Coffee is one of the main cash crops that is cultivated in Fundong Sub-Division alongside cassava and soya beans. The study perception revealed that coffee is cultivated by about 60% of the targeted population while 40% is involved in other activities. Coffee production in this area is mostly produced once a year as seen in figure 2. Some 75% of the population confirmed that they do cultivate coffee, cassava and soya beans once a year. (Figure 3)



Figure 3: An individual coffee farm in Fundong.

Source: Fieldwork 2024

The farmers start their planting around May and June, pruning and spraying process of the coffee is usually in January and February in order to encourage future growth. The harvesting of coffee usually starts on October to December. The high practice of this coffee production is been encourage by some stakeholders existing in this area such as cooperatives and CIGs despite the numerous challenges encountered by some of these farmers. The study showed that there exist a cooperative society called “Fundong cooperative produce and marketing society limited” which brings together farmers, educate and sensitize them on stages of coffee production. These cooperatives equally give those seeds and farming tools in other to encourage them on the cultivation of coffee. Also there exist a CIG in Ngwainkuma village called the “little hands farming group Ngwainkuma”. This CIG is mainly for coffee farmers, it has help to bring main coffee farmers together in the area and encourage them on the importance of coffee. This CIG helps provide seeds to the farmers and other farm inputs such as fertilizers, sprays against pest and farming tools such as Matabi sprayer, coffee hand grinding machines and other related farm tools. On the other hand, cassava, soya beans and other crop types are equally cultivated on the same land with coffee. During this time, tilling of farm is around March and planting follows immediately after tilling while

harvesting is usually around October. Produce from this farm practice is been sold in the neighboring markets which helps bring income to the farmers and thus increasing their living standard. The farmers in this area cultivate two main types of coffee which are the Robusta coffee type and java coffee type (Figure 4)

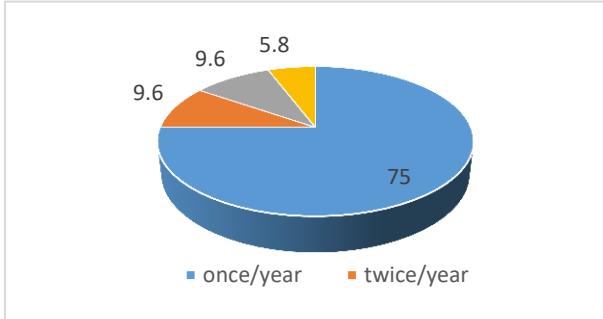


Figure 4: Perception of Cassava, soya beans and coffee

Source: Fieldwork, 2024

For the cultivation of cassava, soya beans and coffee, 75% of the population indicated that they are active in coffee, cassava and soya beans farming once in a year while 9.6% of the population indicated that they are active in cassava, soya beans and coffee farming twice a year. On the other hand, 9.6% of the population indicated that they are active in cassava, soya beans and coffee farming thrice a year while 5.8% of the population indicated that they are not active in coffee, cassava and soya beans farming. The results show that a majority of the population that is 75% of the population is involved in the cultivation of coffee, cassava and soya beans once in a year.

B. Mixed Forest and crop farms

Mixed forest crop farms here is a situation where many tree crops are cultivated on the same piece of Land. Some of the tree crops cultivated in the study area include; bananas, pears, mangoes and plums. The study revealed that majority of farmers in the area have shifted attention from the cultivation of food crops to mixed forest crops because it is giving them much income. One of the respondents said he harvest and sold like 10 to 15 bags of pears and plums within a year which gives him huge amount of money which helps him, to be able to afford his basic needs thereby sustaining his livelihood through mixed Forest agricultural practice. The study revealed that most of this mixed forest crops is mostly practiced once a year as seen on figure 8 below where about 51.6% of the population agreed that they cultivate mixed forest crop once a year. On the other hand, others do it twice and even thrice a year. The reason why most of these farmers prefer this mixed forest farming is because it involved little attention as compare to other crops (Figure 5).



Figure 5: Mixed forest Farm by an individual Farmer.

Source: Field work 2024

With mixed forest crop type the farmland is cleared and the crops are planted, little attention is given to the crops until when the crops start producing. The study shows that among these mixed forest crops, bananas is the crop that needs more labor and it's the one with the highest output. A respondent said he usually got much money from the sale of banana as he produces large quantities of bananas and he uses the money to invest more in the farming of other crops thereby promoting agriculture and livelihood. Despite the undoubted benefits of mixed forest crops, species experience risk of catastrophes such as wind blow and loss from pest. Some of the farmers in this area give very little attention to mixed forest crops thereby exposing them to diseases. They forget to know that good forest practice is a technical contribution to sustainable forest development and economic consideration are of major importance. For the farmers to maintain good forest practice, the clearing and establishment techniques must be appropriate to the site with particular reference to the species as well as soil type, slope and rainfall intensity. Any practice that risk serious erosion or loss of fertility is not good for mixed forest practice.

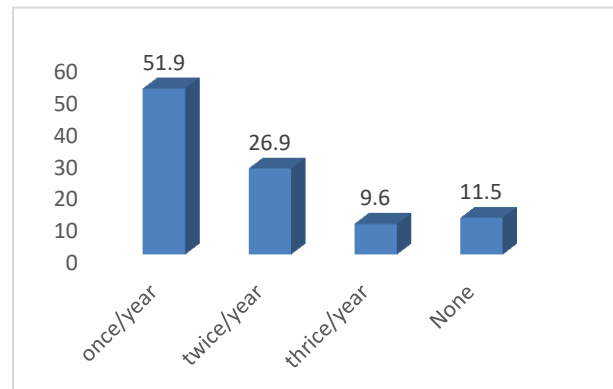


Figure 6. Mixed forest and crop farms

Source: Fieldwork, 2024

In relation to the cultivation of mixed forest and crop farms, 51.9% of the population agreed that the work once a year while 26.9% of the population agreed that the work twice a year. On the other hand, 9.6% of the population agreed that they work in the mixed forest and crop farms thrice a year while 11.5% of the population identified that they are not involved in mixed forest and crop farms. From the results it can be seen that the highest population of 51.9% of the

population are involved in mixed forest and crop farms once a year.

C. Vegetable gardens

Vegetables gardening has been one of the most livelihood activity that sustains the lives of farmers in Fundong Sub-Division. Some of the most important vegetables cultivated in this area include: cabbages, garden eggs and huckleberry (“Mbass”). Obuobie et al. (2006) observed that the production and consumption of urban vegetables in Ghana is followed by an ethnic pattern. Similarly, it could thus be seen that there is an ethnic pattern in of vegetable consumption in Fundong municipality. The farming of vegetables in this area especially in places like Metang, Ngwainkuma, Fujua and Mbongkisu is practice by farmers of low socio-economic status.



Figure 7: Vegetable, huckleberry (“Mbass”) Farm.

Source: Fieldwork 2024

The leading vegetables in this area is huckle berry (“Mbass”) as it is being use by almost all the population of the area during the preparation of their staple food which is fufu corn and “njamajama” or “Mbass. The high demand for “mbass” vegetable has made many farmers to engage more in this particular vegetable cultivation. The study revealed that a majority of 37% of the vegetables growers are women who grows the vegetables even up to three times a year as seen on figure 4 above where 37% of the population grows vegetable twice a year, 34% of the pollution grows it thrice a year and only 21% does it once a year. The women involved in this vegetables cultivation even form Small groups which brings them together to cultivate “Mbass in large quantities and share other ideas related to the vegetable cultivation. One of these groups include the “Ndo -Mbass, Mentang” which was created mainly for the cultivation of this vegetables. Results revealed that about 100- 200 bags of “Mbass in been sold in Fundong Market daily. This help the farmers to get money through the sell and equally gives revenue to the Fundong council through the cutting of the daily Tickets. The farmers equally cultivate pepper which equally in high demand in Fundong.

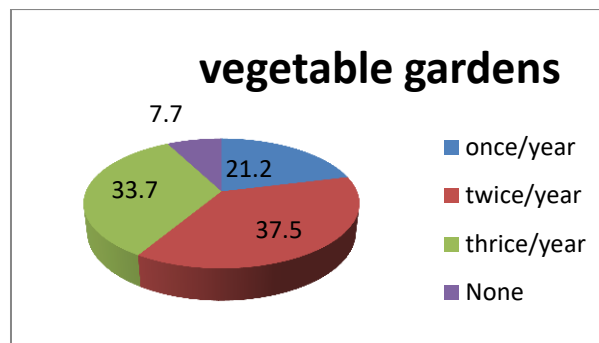


Figure 8. Vegetable gardens in Fundong.

Source: Fieldwork, 2024

In addition, 21.2% of the population identified that they carry out vegetable gardening once a year, 37.5% of the population identified that they carry out vegetable gardening twice a year. On the other hand, 33.7% of the population identified that they carry out vegetable gardening thrice a year while 7.7% of the population identified to the fact that they are not involved in vegetable gardening. The results show that the majority of the population (37.5%) are involved in vegetable gardening twice a year.

Tomatoes and green spice gardens

The cultivation of tomatoes in Fundong Sub-Division is mainly for commercial purpose even though it is being practice by very few individuals. Before the year 1970, farmers were practicing subsistence farming methods before they moved to coffee cash cropping and other farming types. Tomatoes and green spice in this area is mostly practice around Fundong town so as to easily have access to the markets since such products are perishable and can easily get bad if transported over long distances. Some neighboring quarter where these products are being cultivated include; Ngwainkuma, Atoini, Fujua and meli. All these mentioned quarters are close to the Fundong main market where the farmers sell their produce. The study revealed that the farmers usually have high yields during the dry season than the rainy season.

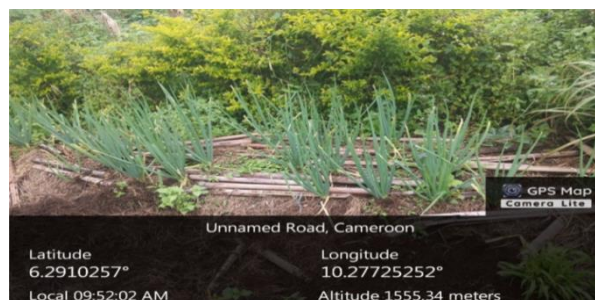


Figure 9: Spice (leaks) farm

Source: Fieldwork, 2024

The farmers pay more attention to tomato and green spice during the dry season and therefore, have high yield during the dry. During this time more irrigation takes place as water is been connected from nearby water bodies to the tomatoes and spice farms.

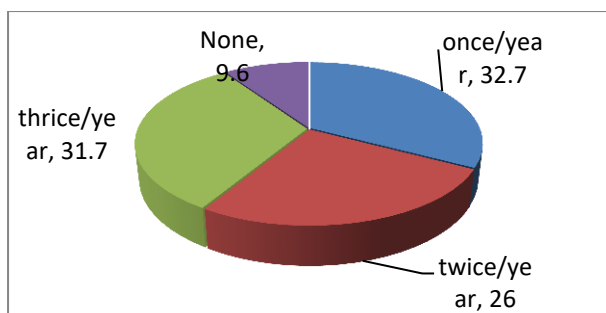


Figure 10: Tomatoes, green spice gardens

Source: Fieldwork, 2024

From the Figure 10 above, it can be seen that 32.7% of the population are involved in tomatoes, green spice gardening once a year, 26% of the population carry it out twice a year, 31.7% of the population carry it out thrice a year while 9.6% of the population do not carry out tomatoes, green spice gardening. The results go to show that the highest proportion (32.7%) of the population carryout tomatoes, green spice gardening once a year.

Other views about agriculture

People have different conception and views about agriculture. Some prefer to practice only crop production while others prefer animal production and others do practice both. For the past years the population of this area use to practice small scale agriculture and very little animal keeping. Some of the animals that were reared back then was local pigs and country fowls which just roam around the quarters with little or no attention given to them.in more recent years due to globalization and modernity, the farmers in Fundong now rear and keep large numbers of animals. Some of the animals commonly reared in this area include; cattle, pegs and argic-fowls. The rearing of these animals especially pigs and fowls go a long way to impact farmers live positively. From the study, a respondent said she keeps about 100 to 200 fowls and about 50 to 100 pigs in her compound and during festive seasons such as December she makes much money from the sales of the animals. She said she make up to one million francs from the sales of her animals and she equally uses the shits of the animals as manure to cultivate her crops and equally sell some of the manure to other farmers thereby sustaining her livelihood through crop and animal production. The money from her sales help her to send her children to school and cater for her family hence increasing here standard of living. The study equally revealed that other people involve themselves in other activities such as hunting and bike riding.

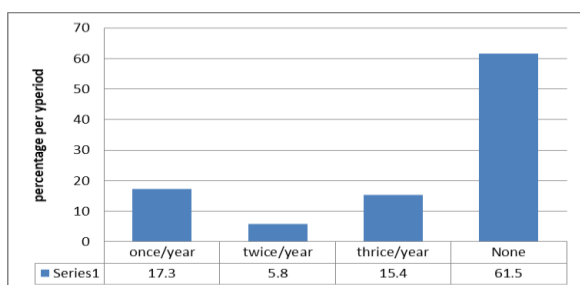


Figure 11. Others view about agriculture

Source: Fieldwork, 2024

The results further go to show that 17.3% of the population carry out other activities once a year, 5.8% of the population carries do other activities twice a year while 15.4% of the population carries out other activities thrice a year. On the other hand, 61.5% of the population which is the majority of the population is not involved in order identified farming activities. The other farming activities identified include: hunting.

3.2 Stakeholders Participation in Small scale agriculture in Fundong

Stakeholders play a vital role to the agricultural sustainability in this area. They struggle hard to ensure the practice of agriculture in this area as agriculture has become the backbone of many economies today and Fundong in particular. So many stakeholders are involved in small scale agricultural production in this area. Some of these stakeholders include, common initiative groups (CIGs) such as the Woin- Ndo Ayongsi which work under ACEFA for the production of maize and beans. ACEFA helps this CIG with farming tools and other farm inputs such as fertilizers They equally provide them with funs in order to enable them acquire land for cultivation The Woin Ndo-Ayongsi common initiative Group was created in 1995 and registered on the 16th of November 1995with registration no NW/GP/01/95/979. This group is mostly made of women and few men. The group has 3 men and 20 women who carryout maize and beans production in about 8 to 10 hectares of land and they carry out two cropping cycles on this piece of land that is the first and the second crop cycle. They said during their first cropping cycle, they cultivate on maize and at the end they harvest about 1500kgs to 20000kgs of corn and during the second cropping cycle they cultivate beans and little corn. We equally have other stakeholders such the Municipal councils and Njangis.



Figure 12: Farming tools provided by stakeholders to Farmers

Source: Fieldwork, 2024

The council help the farmers by providing farming tools and other farm inputs such as fertilizers. Financial supports also comes from Njangis helps in the farming and harvesting of the crops. Cooperatives and credit unions help to provide loans to the farmers at low interest rates. Majority of the stakeholders existing in this area are Peasant farmers and Njangis as seen on figure 13 below where 63.5% of the population agreed that they got their funds through Njangis.

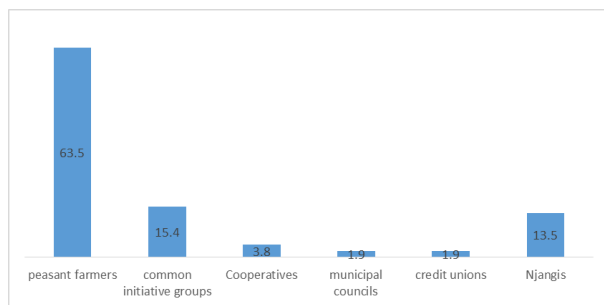


Figure 13. Stakeholders involved in Small scale agriculture in Fundong

Source: Fieldwork, 2024

From figure 13 above, different stakeholders are involved in agriculture in Fundong sub division. Some of these include, common initiative groups such as the Woin- Ndo Ayongsi which work under ACEAFA for the production of maize and beans. This go a long way to enhance farmer’s livelihood in the locality. We equally have other stakeholders such the Municipal councils and Njangis. The council help the farmers by providing farming tools and other farm inputs such as fertilizers. Njangis helps in the farming and harvesting of the crops. Identifying the stakeholder involves in small scale agriculture in Fundong, results show that a majority of the population 63.5% identified peasant farmers as stakeholders. 15.4% of the population identified common Initiative groups, 3.8% of the population identified Cooperatives, 1.9% of the population identified municipal councils, 1.9% of the population identified credit unions and 13.5% of the population identified Njangis. The results go to show that the majority of the population identified peasant farmers as the major stakeholders involved in agriculture.

Role of small farmers as stakeholders

Farmers play a great role as stakeholders in this area as they struggle hard to produce abundant healthy food and many valuable goods to the population. The farmers take care of the soil, conserve water resources and they are caretakers to the mother earth. Farmers play a significant role to the entire community of Fundong. Farmers provide food, fibre and fuel to the marketplace; but they also provide jobs for farm and seasonal workers who in turn spend their money and stimulate local economies to sustain livelihood. The Farmers says Farming is not only about huge commercial farming, it is also about making a difference to household and community nutrition. Most of the farmers produce mainly for family

Role of businessmen in agriculture.	F	%
cultivation/harvesting	11	10.6
subsidies/loans	22	21.2
help provide farming tools	13	12.5
processing/marketing	46	44.2
project funding	4	3.8
None	8	7.7
Total	104	100.0

consumption, they believe that the size of the farm does not matter that they can help anyone who has access to land and want to learn more about grain farming the correct way. This aim to assist farmers to get the best yields possible off each hectare. There is no reason why a small-scale farmer can’t produce the same tons per hectare as a large-scale farmer, the processes must just be done correctly and at the right time. We need to build vibrant rural communities and agricultural activities must be their livelihood. It is possible only if cheap imports don’t compete with local farmer prices. This will go a long way to develop the rural community and enhances the livelihood of the population.

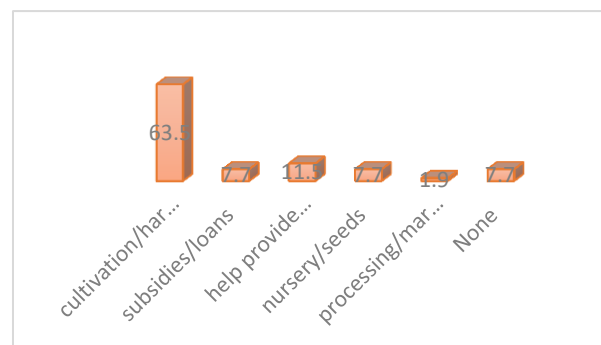


Figure 14. Role of small farmers as stakeholders in Fundong Sub-Division

Source: Fieldwork, 2024

From figure 14, Small farmers are a major stake holder in the farming process. 63.5% of the population identified cultivation /harvesting as the main role of peasant farmers while 7.7% of the population identified that peasant farmers provide subsidies/loans. On the other hand, 11.5% of the population identified that peasant farmers help to provide farming tools, 7.7% of the population identified that small farmers provide nursery/seeds, 1.9% of the population identified processing/marketing as the role of the small farmers. Following 7.7% of the population did not identify the role of small farmers as stakeholders in sustaining farmer’s livelihood. The results show that the major role of the small farmers in sustaining farmer’s livelihood is cultivation and harvesting.

Business men

The primary reason for farming in this area is to make profits Some of the farmers sell their products in the main market themselves and thus act as businessmen too while others sell to “buyam sellams” at very cheap prices and the “buyam Sellams in return sell back the products at very high prices. Businessmen in this area help the farmers to provide them with their farm inputs such as fertilizers, pest/diseases management chemicals and farming tools though at very high prices. Without businessmen farmers in this area won’t be able to get their basic farm needs. From an interview that was carried out, the researcher gathered the following data from businessmen. Over the years, the prices of some agricultural products are declining while others are increasing and so most at times, they are unable to get what they actually need.

Table 4. Business men as stakeholders involved in small scale agriculture.

Source: Fieldwork, 2024

From table 4 above, Business men play the role of cultivation/harvesting as indicated by 10.6% of the population, 21.2% of the population identified subsidies /loans as the role of business men while 12.5% of the population identified the provision of farming tools. On the other hand, 44.2% of the population identified the role of business men to be in processing and marketing, 3.8% of the population identified the role of business men to be in project funding while 7.7% of the population could not identify the role of business men in sustaining farmer’s livelihood. The results go to show that the highest role of the business men as identified by the population (44.2%) of the population in sustaining farmer’s livelihood is in processing and marketing.

Njangis

Many farmers in this area belongs to farming Njangi groups as Njangi groups’ ensured high quantity and high quality of work in the farms. Low disposable incomes makes it difficult for many people to acquire some essential household commodity and this led to the creation of commodity Njangi groups that either collect fixed amounts of money from members or buy commodity that is given to members per session. The advantage of these Njangi groups include intensive labor despite it disadvantages such as robbery and mismanagement of Njangi funds buy other members. Some of these farming Njangi groups include Ndo-Ngamti-Itungha-Mbissi, Woin-Ndo Ayongsi and Ndo-Mbass mentang. These groups have impacted the lives of most farmers in the locality as the farmers are now able to raise money from these groups and save in credit unions there by sustaining their livelihood.

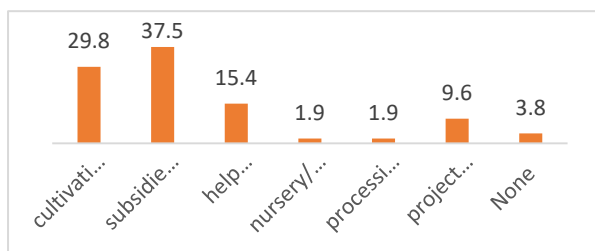


Figure 15: Role of Njangis as stakeholders involved in agriculture in Fundong.

Source: Fieldwork, 2024

The role of Njangis in sustaining the livelihood of farmers cannot be undermined. As seen in figure 9 above, 29.8% of the population identified that their role is in cultivation/harvesting, 37.5% of the population identified subsidies/loans, 15.4% of the population identified provision of farming tools, 1.9% of the population identified nursery/seeds, 1.9% of the population identifies processing/marketing, 9.6% of the population identified project funding and 3.8% of the population could not identify the role of the Njangi in sustaining farmer’s livelihood. The

results go to show that a majority of the population (37.5%) identified that the role of Njangi’s in sustaining farmer’s livelihood is in granting loans and subsidies.

Credit unions

The Credit unions in this area is one of the most important financial institutions with the goal to provide some short-term credit to rural farmers. This institution helps to provide loans to the farmers and equally encourage rural farmers to save in their institution thereby helping the farmers to invest more by preserving money in banks. The main credit union in this area is the Fundong cooperative credit union.

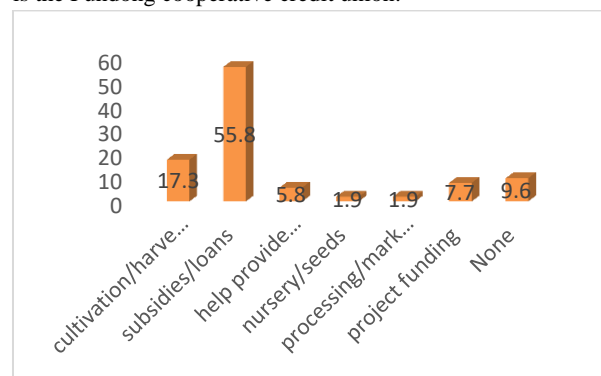


Figure 16. Credit unions as stakeholders in agriculture in Fundong

Source: Fieldwork, 2024

Credit unions have different roles to play in sustaining the livelihood of farmers. The results as shown on the figure 16 above indicate that 17.3% of the population identified that the role of credit union is in cultivation/harvesting, 55.8% identified subsidies/loans, 5.8% of the population identified provision of farming tools, 1.9% of the population identified nursery/seeds, 1.9% of the population identified processing/marketing, 7.7% of the population identified project funding while 9.6% of the population did not identify the role of credit unions in sustaining the farmer’s livelihood.

Cooperatives

It was gotten from the findings that Cooperatives play a critical role in agribusiness in this area in that the cooperatives serve as an internal local market for the members by providing a more reliable, stable and convenient market through serving as market agents where the cooperatives buy commodities from their members for resell for value addition. The cooperatives equally make it easier for members to access inputs for productivity through collective buying. The cooperatives in this area promote savings amongst members through the village savings and loan associations (VSLAs). The cooperatives give loans/subsidies to farmers and equally helps in the processing and marketing of some farm products as explained by table 5.

Table 5: Cooperatives as stakeholders involved in agricultural production in Fundong Sub-Division

Role of stakeholders	F	%
cultivation/harvesting	12	11.5
subsidies/loans	15	14.4
help provide farming tools	34	32.7
nursery/seeds	13	12.5
processing/marketing	10	9.6
project funding	10	9.6
None	10	9.6
Total	104	100.0

Source: Fieldwork, 2024

Cooperatives have a role to play in sustaining farmer’s livelihood. As identified by the population, these roles range from cultivation/harvesting (11.5%), subsidies/loans (14.4%), provide farming tools (32.7%), nursery/seeds (12.5%), processing/marketing (9.6%), projecting funding (9.6%) while 9.6% of the population could not identify the different roles played by cooperatives. As seen from the table, the highest proportion of the population identified that providing farming tools is the major role that is played by different cooperatives in sustaining farmer’s livelihood in Fundong sub division.

Role of CIGs

Common Initiative Groups do have a role to play in sustaining the livelihood of farmers. From the data collected from the, there existed several CIGs in Fundong Sub-Division such Ngamti Ntoah -mbisssi, Woin – Ndo Ayongsi and the Little Hands farming Groups. The CIGs carry out so many actives as far as small-scale agriculture is concern. They plant, harvest, process and even part take in the marketing of the farm output. The findings show the main function of CIGs in this area is to provide nursery and seeds as seen on figure 20 below where 30.8% of the population agreed that the main function of the CIGs is to provide nursery/seeds.

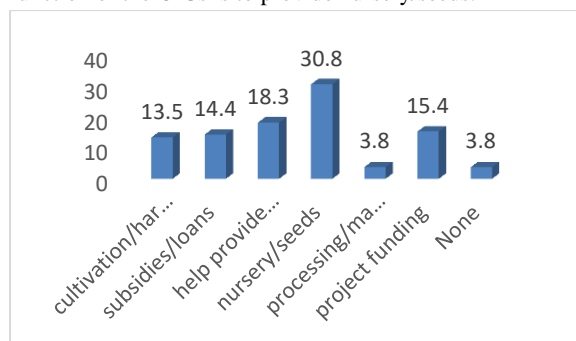


Figure 17. Functions of CIGs as stakeholders involved in agricultural production

Source: Fieldwork, 2024

Common Initiative Groups do have a role to play in sustaining the livelihood of farmers. From the data collected from the field, there existed several CIGs in Fundong Sub-Division such Ngamti Ntoah -mbisssi, Woin – Ndo Ayongsi and the Little Hands farming Groups. The above-mentioned groups are some of the common initiative groups the researcher visited and gather information on the production and harvesting of some crops such as beans, maize and coffee. According to the results as identified by the population, the role the CIGs have to play include cultivation/harvesting 13.5%, subsidies/loans 14.4% provide farming tools 18.3% nursery/seeds 30.8%, processing/marketing 3.8% and project funding 15.4% while 3.8% of the population indicate that they do not know the role played by CIGs. The results go to proof that CIGs have a major role of providing nursery/seeds in order to sustain the farmer’s livelihood. From the data collected through interviews, CIGs equally provide farming tools such as hoes, cutlasses, and some farm inputs such as Fertilizers.

The council

The Fundong rural council played a vital role in agriculture and livelihood sustainability of farmers. The council is one of the strongest stakeholders in Fundong due to the vital role it plays in the promotion of agriculture. The council has tried to construct few farmer to market roads in the area so as to enable farmers to easily get their products to the market. A perfect example of a farm to market road constructed by the council is the Ndio road. The results showed that the main role of the Fundong council as stakeholder in farming is to provide farming tools to farmers. This can be seen in Figure 21 below where 29% of the population agreed to the fact that the council provide farming tools to farmer. The council equally provide other farm inputs.

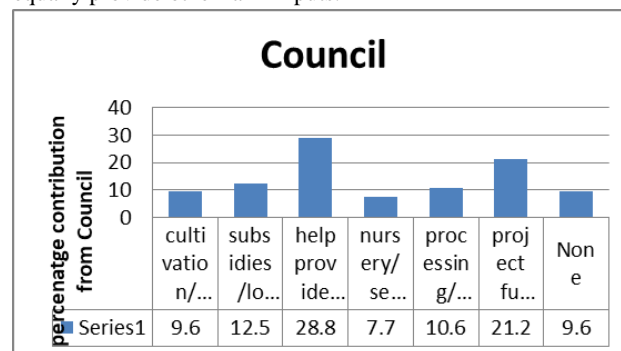


Figure 18: The council as stakeholders involved in agriculture.

Source: Fieldwork, 2024

Councils do have a role to play in sustaining the livelihood of farmers. According to the results as identified by the population, the role the Councils have to play include cultivation/harvesting (9.6%), subsidies/ loans (12.5%), provide farming tools (28.8%), nursery/seeds (7.7%), processing/marketing (10.6%) and project funding (21.2%) while 9.6% of the population indicate that they do not know the role played by CIGs. The results go to proof that Councils have a major role of providing farming tools (28.8%) in order to sustain the farmer’s livelihood.

Other activities of stakeholders in Fundong

The study revealed that despite the fact that small scale farming is the main dominant economic activity in Fundong Sub-Division, there are other activities in this area such as hunting, bike riding and rearing of cattle. Commercial motorbike riding in Fundong Sub-division has led to a diversion of agricultural labor force. In recent years, it has been noticed that the number of young people especially males who used to be actively involved in agricultural production have witnessed a drop to the advantage of the motorbike riding. This has resulted to a corresponding drop in agricultural productivity especially coffee production which happens to be the main cash crop produced in this Sub-division. Parents even have conflicts with their children who refused to assist them in farms but prefer to venture into commercial motorbike sector for quick cash. Before the advent of motorbikes, young men used to participate in agricultural production process either by way of clearing the farms, ploughing or operating their own farms. But today, there have been a gradual shift from agricultural activities to the tertiary sector which is that of commercial motorbike riding in Fundong Sub-division. This has equally gone a long way to implicate the prices of agricultural produce despite its positive impact on agricultural productivity. Most of the farm produce is been transport from the farms to the market through motor bikes as gotten from the findings. This has gone a long way to employ some youths in this area thereby sustaining their livelihood through bike riding. Cattle rearing in this area is practiced mostly by the Fulani's who are found in the highlands of Fundong. They do keep large numbers of cattle of about 200 to 300 cows due to the high demand for meat in this area and nearby towns such as Bamenda. The Fulani's make huge sum of money from the rearing of this animals which help to sustain their lives and better their standard of living. The results equally revealed that hunting is another great economic activity that is been carried out in this area. Some inhabitant of this area has engage themselves in hunting. Other activities by stakeholders are showed on table 5 below.

Table 6: Other activities of stakeholders in agriculture.

Source: Fieldwork, 2024

Other stake holders do have a role to play in sustaining the livelihood of farmers. According to the results as identified by the population, this role include cultivation/harvesting (7.7%), subsidies/ loans (5.8%), provide farming tools (5.8%), nursery/seeds (5.8%), processing/marketing (5.8%) and project funding (9.6 %) while 59.6% of the population indicate that they do not know the role played by other stakeholders or know of any other stakeholders. The results go to proof that other stakeholders have a major role of project funding in order to sustain the farmer's livelihood.

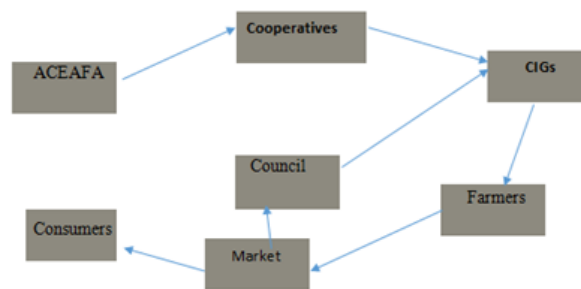


Figure 19: The Relationship chain between Stakeholders and farmers in the Production Process. Source: Author's conception, 2024

5. CONCLUSION

The study's findings underscore the vital role of small-scale agriculture in sustaining livelihoods among rural communities. The diverse farming systems identified in this study demonstrate the resilience and adaptability of small-scale farmers in the face of economic and environmental challenges. By promoting small-scale agriculture, policymakers and development practitioners can contribute to poverty reduction, improved food security, and sustain rural development. The study results also highlight the importance of recognizing and supporting the contributions of smallholder farmers to local and national economies. These farmers are not only primary producers but also custodians of biodiversity, soil health, and ecosystem services. By providing smallholder farmers with access to markets, credit, and technical assistance, governments and development agencies can help to unlock the potential of small-scale agriculture to drive economic growth and sustainable development. Ultimately, this study demonstrates that small-scale agriculture is a critical component of sustainable rural development and livelihood sustenance. As the world grapples with the challenges of climate change, food insecurity, and poverty, the importance of small-scale agriculture will only continue to grow. By prioritizing the needs and interests of small-scale farmers, policymakers and development practitioners can help to build a more equitable, sustainable, and food-secure future for all.

Other function of stakeholders	F	%
cultivation/harvesting	8	7.7
subsidies/loans	6	5.8
help provide farming tools	6	5.8
nursery/seeds	6	5.8
processing/marketing	6	5.8
project funding	10	9.6
None	62	59.6
Total	104	100.0

6. Recommendations

- ❖ Develop and implement policies That support and promote small-scale agriculture, such as initiatives that provide access to markets, credit, and technical assistance.
- ❖ Prioritize sustainable agriculture: Promote policies that encourage sustainable agricultural practices, such as agroecology and organic farming.
- ❖ Support farmer organizations: Strengthen farmer organizations and cooperatives to enhance their bargaining power and access to markets.
- ❖ Agricultural extension services: Establish and strengthen agricultural extension services to provide small-scale farmers with technical assistance and training.
- ❖ Farmer training programs: Develop and implement farmer training programs that focus on sustainable agricultural practices, business management, and marketing.
- ❖ Access to credit and markets: Establish programs that provide small-scale farmers with access to credit and markets.
- ❖ Promote farmer-to-farmer learning: Encourage farmer-to-farmer learning and knowledge sharing to promote sustainable agricultural practices.
- ❖ Support community-based initiatives: Support community-based initiatives that promote small-scale agriculture and sustainable livelihoods.
- ❖ Enhance community capacity: Enhance community capacity to manage and conserve natural resources, and to adapt to climate change.
- ❖ Conduct further research: Conduct further research on small-scale agriculture and its contributions to sustainable livelihoods and rural development.
- ❖ Develop and test new technologies: Develop and test new technologies and innovations that can enhance the productivity and sustainability of small-scale agriculture.
- ❖ Monitor and evaluate programs: Monitor and evaluate programs and policies that support small-scale agriculture to ensure their effectiveness and impact.

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