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**ASSESSMENT OF SMALLHOLDER FARMERS PERCEPTION ON THE PFJ PROGRAMME: A CASE STUDY IN
CHEREPO NI DISTRICT, NORTHEAST REGION, GHANA**



BY

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Dedication

I dedicate this workpiece to my late father, Mr Emmanuel K, Atta Ahlidza, your wish has been fulfilled, but I did not live to see it.

And to my mum, Lousie Yawa Emetor, to my supportive wife Lance Corporal Faustina Boateng and kids Emmanuella Aseye A. Ahlizda and Alwin Jefferson E. K Ahlidza

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List of Abbreviations

Abbreviations	Meaning
AEA	Agricultural Extension Agent
DoA	Department of Agriculture
DTC	District Technical Committee
FAW	Fall Armyworms
FBO	Farmer Based Organisation
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GoG	Government of Ghana
GSS	Ghana Statistical Service
HA	Hectare
ICT	Information and Communication Technology
MOFA	Ministry of Food and Agriculture
PFJ	Planting for Food and Jobs
SRID	Statistical Research and Information Directorate

Abstract

The study assessed the perceptions of smallholder farmers in the Chereponi District of the North-East Region of Ghana on the Planting for Food and Job Programme in the District.

PFJ forms part of the Modernizing Agriculture in Ghana (MAG) agenda, which supports governments efforts to decelerate the declining growth of the agriculture sector over the past 8 years, with the aim of motivating smallholder farmers to adopt high yielding, climate-resilient certified seeds and fertiliser combined with effective agricultural extension delivery to increase farm productivity and a private sector-led marketing framework over an E-Agriculture platform.

For the study, 25 smallholder farmers and 2 Key informants were interviewed, and 2 FGDs were conducted to gather primary data from the beneficiaries. Moreover, interviews were conducted for data from key informants (1 input dealers and one farmer Based Organisation chairman. Secondary data were sourced from journals, reports, articles and books.

An explanation for the low participation of women and youth in the programme found in this study is that the policy did not consider the gender production need in the programme design. The programme did not cover the female priority crops due to their restriction on the crops

Agricultural extension information and knowledge gap among farmers in the district and the DoA is found to be wide. Farmers since the inception of PFJ have not fully informed on the programme, the packages involved and the implementation strategies.

Some farmers were not aware of the full package of the programme, therefore, could not fully participate in all the pillar. Lack of information/awareness of all the five pillars of the programme affected the farmers' full participation in the functioning pillars in the district.

Farmers had little knowledge of the seeds available.

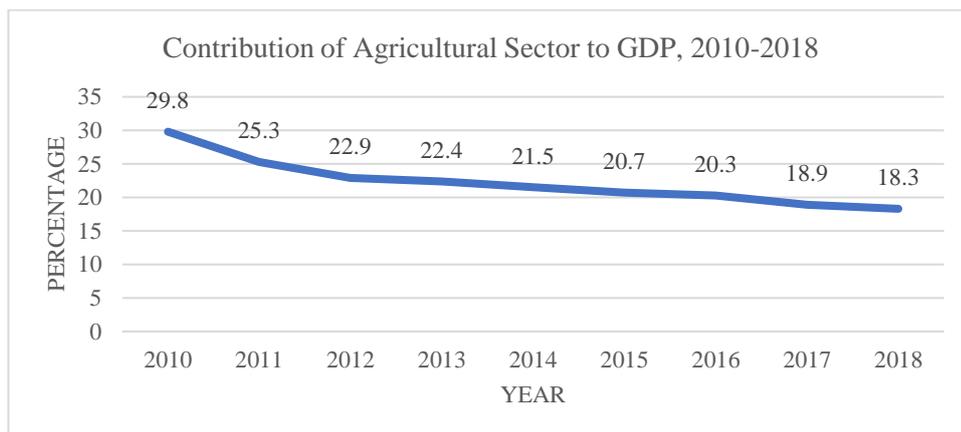
There were no specific strategies implemented to whip up enthusiasm and interests of the youth and women to get them onto the programme, and this affected their participation. There is a need for the PFJ programme and major stakeholders to come out with special packages for the youth and women.

CHAPTER ONE INTRODUCTION

1.0 Background

Ghana's Agriculture sector remains a significant player economic sector of the country. About 65% of the rural population is engaged in both the formal and informal sector. Agriculture contributes 80% to smallholders households' income, food and nutritional security (Yawson et al., 2010; MOFA, 2016).

Figure 1: The contribution of the Agricultural sector to GDP



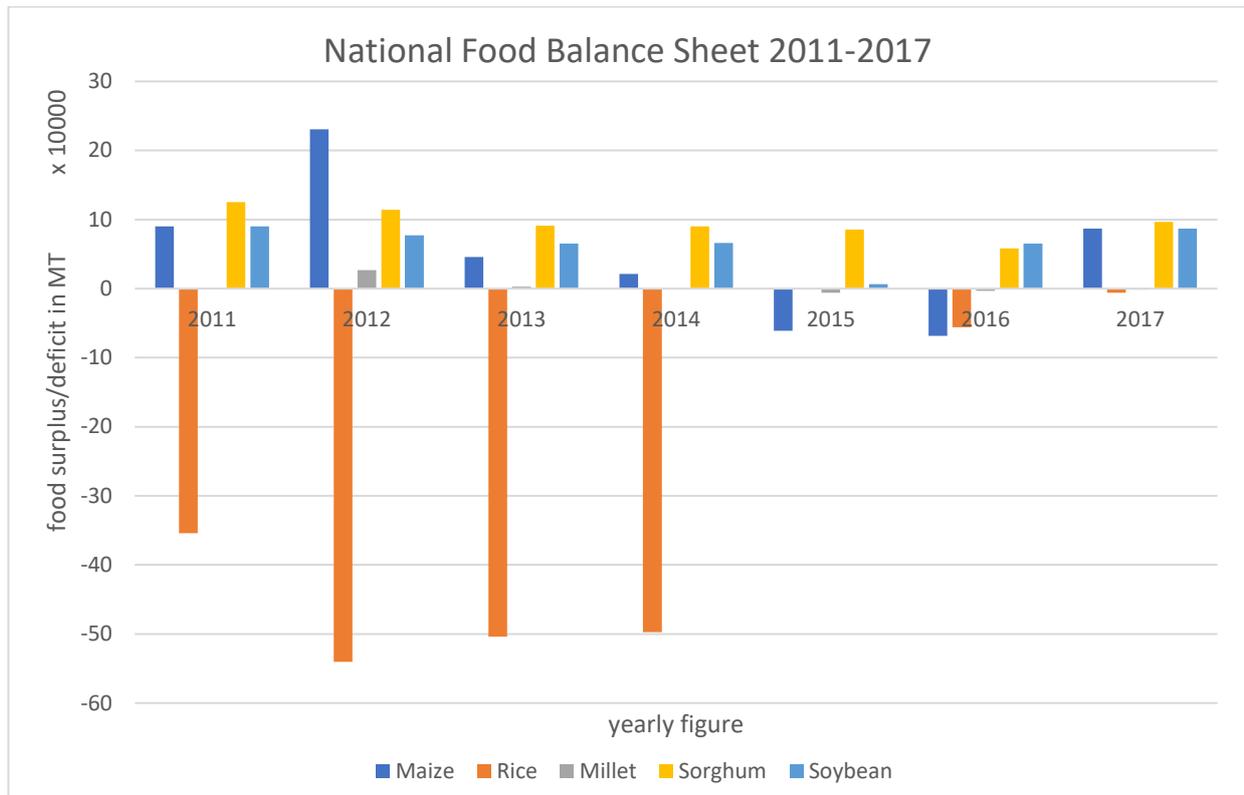
Source: MOFA/SRID 2017 & ILAPI- GHANA

In recent years there had been a decline in the contribution of the agriculture sector to National Gross Domestic Product (GDP) of the country from 29.8% in 2010 to 18.3% in 2018 (MOFA, 2017; ILAPI-GHANA). On-farm productivity of the country's major staple crops such as maize, rice millet and sorghum has been observed to have stagnated over the years with a difference in the actual and potential output of most crops (yield gap) widened. The production gap has affected the demand and supply chain of these staple crops in the country. Over the past five years, the major staple crops have recorded unstable economic production affecting the supply on the market (Figure 2). This shows a massive gap in on-farm production that has created a food deficit of these staple crops, most notably rice. Governments in the past have rolled out production intervention like fertiliser subsidy, the seed development, agricultural extension programme aimed at addressing the production gap. youth in agriculture programme and seed the supply chain is much of a worry to successive governments (MOFA, 2016)

The country's agriculture predominately is a rural activity and subsistence in nature. Smallholder farmers form the base of the sector, offering enormous potential for government to spearhead poverty reduction policies. Governments have introduced the modernisation as a tool for industrialising the sector and an engine for accelerated economic growth (MoFA, 2017)

Based on the significance of agricultural commodities produced to the economy, products are classified as foodstuffs for local consumption, raw materials for local industry, and commodities for the foreign market. Despite increased investment in the sector set targets in growth under achieved which reveals several challenges that hinder the development of the industry (Nyamekye, 2015).

Figure 2: National food Balanced Sheet 2011-2017



Source; MOFA/SRID, 2017

According to Nyamekye (2015), Ghana’s agriculture is operating at about 20% of its full potential. Low crop and animal productivity characterize Ghana’s agriculture sector (Yawson et al., 2010). In achieving higher economic development goals, challenges need to be addressed through the modernization of the agriculture sector. Low soil fertility due to depletion of soil nutrient and low use of both organic and inorganic fertilizers contribute largely to non-attainment of potential yields. The type, quality and quantity of inputs, limited Extension service, poor infrastructure development and inadequate technology are the other factors (MoFA, 2013) as cited in (Nyamekye, 2015). These aggregated factors are hindering agricultural growth, serving as a disincentive factor discouraging farmers from investing and producing. (Darfour and Rosentrater, 2016)

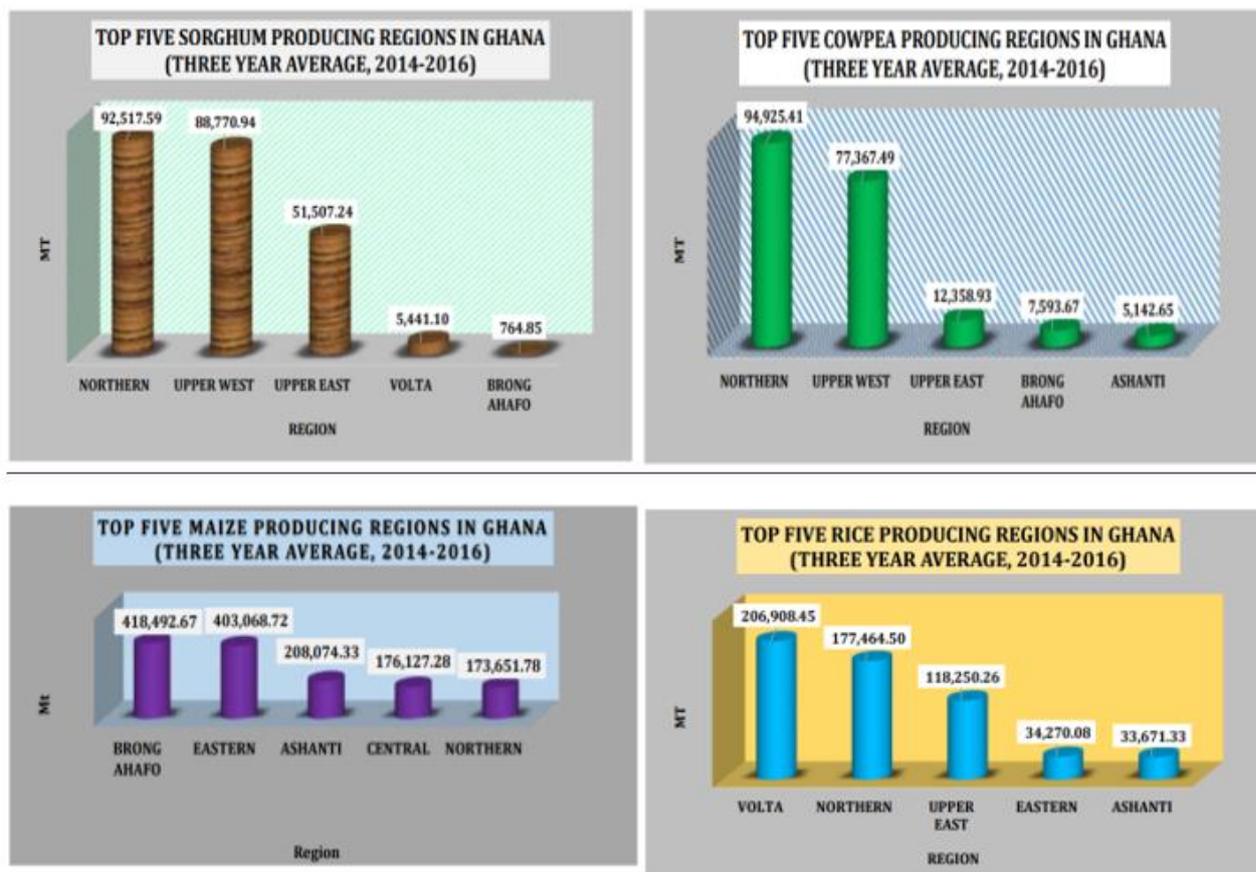
Mabe et al., (2018) stated that the Government of Ghana believes in the global evidence which suggests that there exist many ways through which productivity in the agriculture sector can prompt transformation development of the economy by virtues of changes in real income, employment generation, rural non-farm multiplier effects, and food prices effects. Access, availability and control of agricultural inputs are one of the critical ways to increase agricultural crop yields, improve agricultural productivity and income of farmers (World Bank, 2014).

The Northern region is located between the Guinea and Sudan Savanna ecological zone, with a total landmark of 147900km²(MOFA, 2016). The annual rainfall for the region is between 800mm-1200mm (MOFA, 2016). Northern Ghana has a uni-modal rainfall season making it vulnerable to drought risk as compare to southern Ghana, which has two raining seasons within the year, hence on the growing season for crop production (GSS, 2014; Dietz et al., 2004). Agriculture remains the primary economic engagement in Ghana (GSS, 2014). Agriculture, the largest employer of the people (75% of the population), predominately small-holder farmers with land resource below 5 acres. The northern farmer is challenged

by poor soils (organic matter content 0.00-6.74%/kg of soil, nitrogen- 0.00-0.14%/kg/soil) low productivity and changing and increasingly unpredictable rainy seasons (MOFA, 2017).

Although the above challenges persist, the region’s contribution to the national food basket cannot be overlooked; figure 3 shows the region leads in the millet, sorghum and legume production (MOFA, 2017), it, therefore, offers a great opportunity for agricultural development

Figure 3: Contribution of the Northern Region of Ghana to the National Food Basket



Source; MoFA Facts & Figures, (2016)

1.1 PLANTING FOR FOOD AND JOBS (PFJ) PROGRAMME

The government of Ghana (GoG) over the past decade has rolled out subsidy programmes towards increasing farm productivity and thereby catapulting a structural transformation of the country’s economy through increased farm incomes and job creation (MOFA/FASDEP II, 2007).

Inputs subsidy programmes in Ghana dates back to the ‘60s and ‘70s. The success story of the green revolution in Asia and Latin America, which resulted in the massive transformation of agriculture in the period triggered subsidy programmes in African with the same hope of the Asian breakthrough (Baltzer and Hansen, 2011). Asia in the mid-1960s was on the brink of hitting the disaster stage. Hunger and malnutrition become extensive after years of neglected food production coupled with swift growth in population. India experienced a prolonged drought combined with similar occurrences of food insecurity in neighbouring countries. There was an enormous food shortage in the region (Hazell, 2009). Poverty and hunger escalated and caught the attention of the international community. According to Patel (2013), the Rockefeller and Ford Foundations the world bank and the US Government took the lead initiative in creating an international agricultural research program to help adopt new agricultural technologies to conditions in developing countries. The support focused on improved varietal development, combined with the expanded use of fertilisers and other chemical inputs, irrigation, and public policies that

supported agriculture, the initiative led to dramatic yield increases in Asia between 1965 to 1990 (Hazell, 2009). However, the green revolution largely failed South Saharan Africa (SSA), including Ghana as agricultural input usage by farmers, remain very low. Seed development and adoption of technology are till, and production is rainfed. Between 2002-2003 SSA farmers used on average 9 kg of fertiliser/ ha compared with 100 kg per ha in South Asia, in Southeast Asia 135 Kg/ha and 73Kg in Latin America (Crawford et al., 2006; Baltzer and Hansen, 2011). Agricultural production and productivity over last four decades, has largely stagnated in Ghana, resulting in a rising dependency on imported grains due to the production deficit (Wiggins and Brooks, 2010; Future Agricultures, 2010), such as rice for home consumption, yellow maize for animal feed (Figure 2).

In compliance with the Abuja and Malabo Declaration, which mandates member states to allocate 10% of its budget to agriculture development in the region, the Government of Ghana decided to increase efforts on subsidising inputs to create access, availability and control by smallholder farmers of agricultural inputs aimed at increasing usage(MOFA, 2013; MOFA, 2017) and contribute to farm productivity.

For this course, the GoG has initiated a flagship programme called Planting for Food and Jobs (PFJ) Programme. It is a four-year programme (2017-2020). The estimated costs of full implementation stand at 3,335,031,070 GH¢ (723,538,502 USD) over 4 years (MOFA, 2017). PFJ forms part of the Modernizing Agriculture in Ghana (MAG) agenda, which supports governments efforts to decelerate the declining growth of the agriculture sector over the past eight years (MOFA, 2017). The Canadian Government has injected \$120 million to support the PFJ. Smallholder farmers adoption of improved and certified seeds and fertiliser is low. Seeds were imported from South Africa (PANNAR-Maize seeds) and Togo (Rice) in the first year of implementation. Current seeds are sort from local seed growers. The program has strengthened research and development, resulting in locally diversify varieties (Jasmine 85 for Rice, Obatanpa, Wangdata for maize and Jenguma for soybeans) made available to the farmers. Adoption of varieties that are high yielding, climate-resilient and resistant to the prevalent biotic and abiotic stresses to be actively promoted through the program. To enhance fertiliser usage and sustainability, the government incentivising a private sector-led marketing and complimentary service provisions on the usage of inputs, good agronomic practices (GAPs), marketing of outputs over an E-Agriculture platform (MOFA, 2017).

As part of the PFJ programme, the government, through MoFA is facilitating the distribution of subsidised farm inputs and providing extension services to farmers. This is to ensure that the technical knowledge received by farmers through extension service is complemented with the necessary farm inputs to enhance productivity. The PFJ also intends to provide a framework for agricultural value chain development where farmers would be engaged through the private sector (MoFA, 2017). The value chain development is to lead to increasing the adoption of improved seeds, fertiliser application and GAPs, and output market for produce. An agricultural value chain integrated ICT database platform established. The integrated electronic platform interaction (Input dealers, Aggregators, Extension, Banks and plant protection unit) between farmers and relevant agribusiness enterprises to facilitate and to ensure reliable access to information on extension, inputs (improved quality seeds, fertilisers, etc.), financial services and output markets (MoFA, 2017).

1.2: The PFJ Programme Goal and Objectives

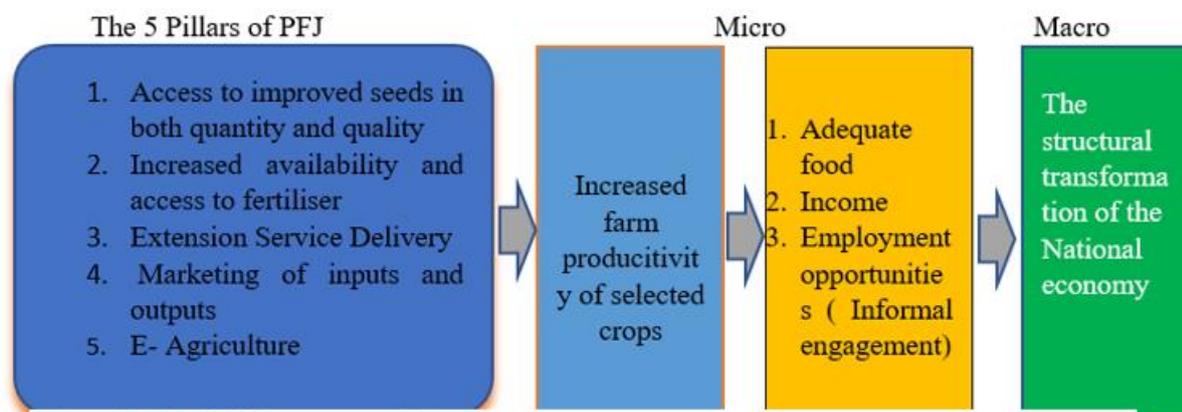
PFJ programme is to mobilise access to market (input- and output) and thus directly creating farmers' access to subsidised input to increase usage of these inputs and resulting in yields, providing indirect jobs opportunities along the value chains (MOFA, 2017). Specifically, PFJ aims at increasing the yields of maize, rice and soybean from the current figures of 1.7Mt/Ha, 2.7Mt/Ha and 1.7Mt/Ha to 5Mt/Ha, 4Mt/Ha and 5Mt/Ha respectively by 2020.

The PFJ programme is a national agricultural policy programme. It is also to boost Ghana’s production competitiveness and create more jobs along the marketing supply chain and formal engagement of technical extension staff at national, regional and district levels. The programme seeks to enhance the productivity of significant food crops based on the crop preference of the geographical areas through integrated services on farming and marketing(MOFA, 2017; Mabe et al., 2018)

The PFJ programme has these specific objectives to achieve as;

- i. To ensure self-sufficiency by improving productivity and intensifying the cultivation of some selected food crops.
- ii. To provide employment opportunities (both formal and informal) to the unemployed persons, especially the youth in agriculture and its related sectors. Youth in Agriculture programme has engaged 800 young entrepreneurs at the end of 2018. 275 extension staff have been employed and posted to the 216 District Department of Agricultures.
- iii. To create a general awareness of the significance of having farms and backyard gardens for the cultivation of cereals and vegetables.

Figure 4: Summary of the PFJ to economy



Source: PFJ policy document, (2017)

The Five Pillars of PFJ

The PJF programme consists of five strategic pillars, which are

1. **Certified seeds:** The programme provides timely access to adequate quantities of hybrid or improved seeds through private enterprises at a subsidised price. Farmers can have access to these inputs at certified public and private outlets.

The programme will strengthen research and development to diversify the varietal choices available to the farmers. Adoption of varieties that are high yielding, climate-resilient and resistant to the prevalent biotic and abiotic stresses to be actively promoted through the programme. The programme will support research and development to expand on choices of crop varieties available to farmers. And to effectively promote the adoption of high yielding, climate resistant and resilient varieties.

2. **Fertiliser subsidy:** Through this pillar of the PFJ, adoption and intensity of fertiliser application by farmers is re-enforced through the provision of adequate quantities and cost-effective fertiliser. Private enterprises are hired to facilitate the demand of farmers for this input through timely procurement and distribution of the inputs through their agents and retail outlets in the communities.

3. **Agricultural Extension Service delivery:** MoFA will beef up extension service delivery through recruitment, provision of adequate logistics and close working relationships with the beneficiary farmers. The extension agents are to provide technical support to the beneficiaries so that they can enjoy the full benefit of the programme.

4. Marketing: Under this pillar, input and output markets will be strengthened through the promotion of partnership between farmers, nucleus farmers, aggregators, input dealers, farmer-based organisations (FBOs) and private sector agribusiness production units. The programme also collaborates with the Ministry of Health, Ministry of Education, Ministry of Trade and Industry as well as the private sector to provide a reliable and readily available output market for the agricultural produce. As part of the programme, new warehouses are to be constructed closer to the production districts by December 2019, and old warehouses are to be rehabilitated. These are to ensure that farmers’ outputs are marketed so that: (a) farmers can pay for the remaining 50% of the cost of the inputs, and (b) minimise the seasonal effects of price volatility, which has been one of the critical challenges in the agricultural sector.

5. E-agriculture: The PFJ employs ICT to profile the beneficiaries to minimise the rate of subsidised input diversion. It uses real-time and cloud computing services to validate the profile of the participating farmers and create an integration amongst the pillars. This is to ensure swift responses, effectiveness, transparency and accountability of all partnering agencies supplying inputs and other services to the beneficiaries. The input dealer records the details of the recipients and the quantity of input accessed on the platform through a mobile network. The hardcopy of the purchase voucher is submitted to the Department of Agriculture for editing and onward submission to the regional office.

The beneficiaries

The PFJ programme is a National programme and covers the 216 administrative areas in the country. The prioritised food crops are; maize, rice, tomato, sorghum, chilli pepper, onion and Soybeans. The program focusses on all smallholder farmers with lower productivity capacity and whose land, water, labour and capital constrain productivity (resource-poor). Participating farmers have a subsidy package cover for 2 Ha. Any additional input for extra acre/hectare has to be acquired at the open market price (MOFA, 2017).

1.3: THE PROBLEM STATEMENT

The PFJ is a national programme, and as in other districts in Ghana, in Chereponi district the PFJ programme was launched in 2017, to provide input subsidy, effective extension services, private sector-led market and ICT innovation platform for smallholder farmers to enhance farm productivity. However, two years into the program, evaluations performed by the DTC/PFJ/MOFA team still showed low farm productivity of staple crops as against the aims of the programme in the Chereponi district as shown Table 1 (DOA/MOFA Annual Report, 2018). The table shows production figures of the major staple crops grown falling below the national average yield figures except for soybeans. Maize yield 1.6Mt/Ha 2.3Mt/Ha and Rice 2.16Mt/Ha 2.7Mt/Ha.

PFJ aims to raise the production figures of all the district above the benchmark of the selected crops. So the DoA is working to raise the district production to the national benchmark in the table below. By this objective, increasing farmer productivity is achieved

Table 1: Comparison in yield/ha of staple crop for 2018

Crop	Projected yield National MT/HA	Achieved National (MT/HA)	Achieved district (MT/HA)
Maize	3.50	2.3	1.6
Rice	4.0	2.7	2.16
Sorghum	2.0	1.80	1.43
Soybeans	3.0	1.9	2.2

Source: DoA Chereponi report,(2018)/MOFA, (2017)

The Department of Agriculture in the Chereponi district is worried about this consistent low farm productivity. The PFJ programme uses the top-down approach in reaching target beneficiaries in the country. There is no clear-cut guideline for including the various categories of farmers and their needs (age, gender, Agro-ecological zone). Indeed, PFJ talks about farmers in general but not considering the production needs of adult women, adult men and youth. Thus, affecting targeting, participation by the beneficiaries in the district.

Therefore, there is a knowledge gap in terms of what the programme seeks to offer and what the smallholder farmers needs are in the district. Chereponi District Department of Agriculture commissioned this research to understand their needs as a way of their perception on the PFJ programme to develop new strategies for implementation of the PFJ and other development interventions in the district.

The Commissioner: The commissioner for this research is the Department of Agriculture, Chereponi district. The researcher is a staff of the department as the Management Information Systems Officer for the department.

Research objective

The objective of the research is to understand smallholder farmers' perception of the PFJ in order to give recommendations to the Department of Agriculture for implementation of the PFJ.

Main Research Question.

This research will address the main research question and the sub-questions below. These questions were formulated based on Karugia's framework presented in the next chapter of the study. The sub-questions focus on four dimensions of the framework, the design and implementation, targeting, problem identification and the crosscutting boxes.

How do problem identification, targeting and implementation of the PFJ programme differ from a farmers' perspective in the Chereponi district, Ghana?

Sub-questions

1. What do male and female smallholder farmers perceive to be the problem the PFJ programme needs to address?
2. Who are the farmers who participate in the PFJ programme?
3. How are the farmers participating in the PFJ programme?
4. What are the reasons for their way of participation in the PFJ programme?

CHAPTER TWO: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

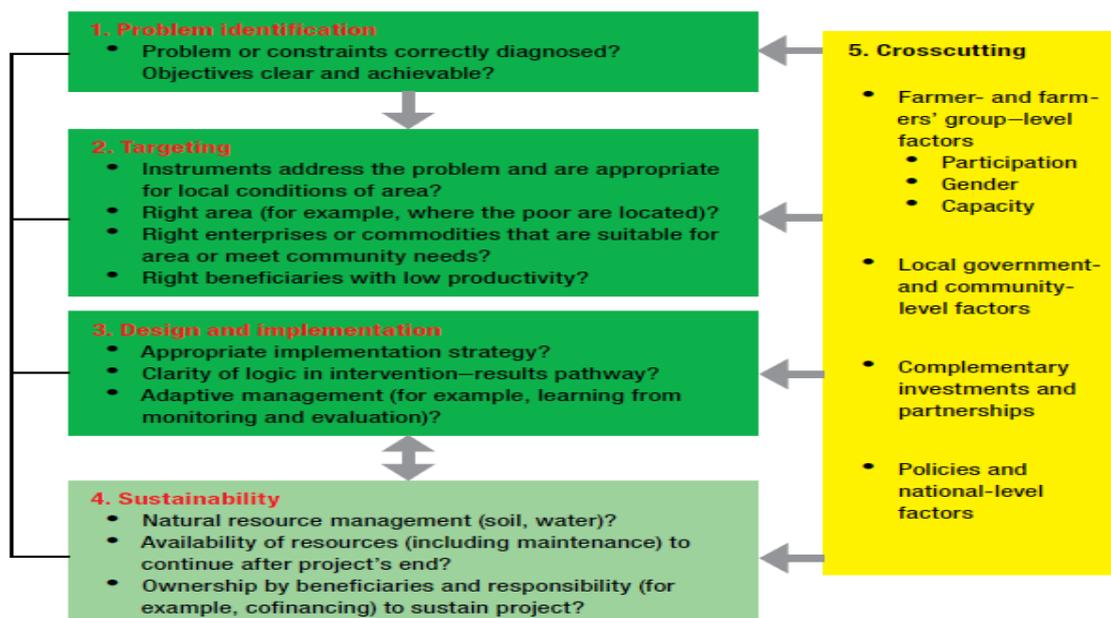
This chapter presents the main definitions and concepts used in this study and also a review of other authors who have conducted similar studies elsewhere in the world. The researcher will review past subsidy policies on inputs in Ghana and link it to the current PFJ programme. Under the PFJ, the researcher will be looking at challenges with problem identification, the targeting, the design and implementation and the crosscutting areas, their influences and linkages. Some key terminologies would be defined for this study.

2.1 Karugia's Conceptual Framework

Karugia et al. (2016) developed this conceptual framework based on an extensive review of the literature on developmental theories and rural development.

The framework has been tested and used by researchers and organisation to evaluate projects in about 10 African countries (Ghana, Kenya, Burundi, Eritrea, Uganda, Togo, Benin, Ethiopia, Guinea, Burkina Faso and Malawi)(Karugia et al., 2016). The versatility of the framework makes it a useful tool for assessing on-going productivity-enhancing interventions like the case of the PFJ in Ghana. The Karugia's framework has five thematic areas that fit into productivity-enhancing interventions easily, namely; the problem identification, targeting, design and implementation, sustainability and crosscutting issues (Figure 2.1). The connecting arrows indicate the influence of one thematic area on the other. The one-way influence indicated by a directional arrow while two-way arrows indicate that a factor influences the other and vice versa (Karugia et al., 2016). The framework focuses on how the underlying problems necessitating the programme design and implementation was identified with or without stakeholder participation, and the level of stakeholder engagement, the targeting and other crossing cutting issues that directly affect implementation Productivity-enhancing interventions were assessed according to the five main dimensions (Karugia et al., 2016). The interventions addressed a wide range of constraints, such as extension, institutional capacity, input subsidies, environmental degradation, and water resources. The scores rating ranges from low to very high. Programmes that had a percentage of target achieved below 50% rated as 'very poor', 50-80% rated 'poor', moderately rated programmes scored 80-100. Between 100-120 programmes scores, rated as 'good' and above 120 the based on the assessment rated 'very good'. Zimbabwe Fuve Panganai Irrigation Scheme (27% score), Kenya Dairy Development Programme (48 %) and Kenya Animal Health Service Rehabilitation programme (50%) were among programmed that failed under the assessment using this framework. Crop crisis control Programme implemented in Kenya, Uganda, Tanzania Rwanda, Burundi and DRC was rated good with a score of 118% of the target achieved. Sasakawa Global 2000 Agricultural Programme in Ghana, Sudan, Tanzania, Benin, Togo, Mali, Malawi rated as very good with a score of 178% of the achieved target (Karugia et al., 2016). Karugia et al., (2016) finds that projects that scored high in most of the factors performed better in achieving the overall productivity target, compared with projects that had low scores for most of the factors. He noted again that the probability of a programme achieving the overall target is influenced most by six of the factors— suitability of instruments, design and timing of implementation, environmental sustainability, financial sustainability, community participation, and organised groups.

Figure 5: Karugias Framework



Source: Karugia et al. (2016)

2.2 Definition of key concepts of study

This framework provides a broader dimension for identifying the key concepts of development intervention for an evaluation study on the effectiveness of the intervention. This study will narrow down its scope and focus on the three key concepts: participation, the capacity of both staff and beneficiaries' farmers and lastly access and control of resources. The focus is to study the dynamics and the interaction of these crossing cutting areas on the problem identification, targeting and the design and implementation dimensions of the framework on the context of the PFJ programme in Chereponi district.

Access and control

Paul and Meena (2016) defined access as the right and opportunity of male and female to use the productive resources as per one's need in agricultural activities and control as the right and power of both male and female to decide on the use of the productive resources at a given time. There is growing evidence according (Paul and Meena, 2016) that, gender roles play a very critical role in economic development and poverty reduction.

A study by the World Bank (2012), revealed an increase in maize in Malawi, Ghana and Western Kenya by 16%, 17% and 19% respectively when women were given equal access and control of productive resources. The productivity gaps can be worsened if programmes, interventions and projects fail to create equal access and control of productive resources and curb discrimination against women during targeting. Unequal access and control of production input such as improved seeds, fertilisers and other factors social capital is the reason for production gaps between females and males (Quisumbing et al. 2014; Namonje-Kapembwa and Chapoto 2016). The type and choice of agrarian enterprise male and female engage are a piece of evidence, and the differences in productivity constraints are observed in gender across Africa (SOFA Team, 2011). Female farmers face more constraints such as limited access to productive land, labour, credits, mechanization services and extension service resulting in lower yields than those of their male counterparts (Kristjanson et al. 2010; Peterman 2010; SOFA Team 2011; SOFA Team and Doss 2011; Croppenstedt, Goldstein, and Rosas 2013; Karugia et al., 2016).

Various studies, suggests that husbands' and wives' relations relative to intra-household decision-making authority is highly relevant to resource allocation, that is, most households do not fully pool income, and

in many cases spousal preferences are not homogeneous (Duflo & Udry, 2004; Balasubramanian, 2013; Richards et al., 2013 Anderson, C.L., Reynolds, T.W. and Gugerty, M.K., 2017). Female farmers are noted to cultivate crops requiring less commercial inputs as groundnut and sesame- also sometimes referred to as women crops

Capacity

In Ghana agricultural extension service delivery has been low. Much of the challenges can be attributed to the inadequate number of professional staff at the districts to implement the interventions, inadequate logistics and the refusal of non-professional Agricultural Extension Agents (AEAs) employed under youth in agriculture model to work in rural districts. The ratio of Agricultural Extension staff to farmer ratio is about 1: 1000-4000 creating a gap (MoFA, 2016; Speranza et al., 2009). The gap has led to spatial coverage, selective targeting and reduced effectiveness of meeting the growing demand for extension advisory services by farmers in the country (Speranza et al., 2009). The numbers of extension farmer contact is further exacerbated inadequate motorbikes and fuel for AEAs to carry out their mandate effectively, weak market linkages and poor tracking of inputs, comprehensive e-agriculture (e-extension via mobile phone platform, e-input tracking system, e-market linkages, e-payments for inputs, e-registration of farmers etc.) and limited knowledge to staff (Danso-Abbeam, 2018)

The capacity (especially technical and managerial skills) of farmers and communities influences several of the factors discussed above. Whereas farmers may be better informed about their production environment, they may not have the technical skills to analyse complex, interrelated factors and to manage them accordingly (Yawson et al., 2010). Therefore, building their capacity in a manner that complements their indigenous knowledge will likely not only increase the speed of innovation and adoption but also strengthen their commitment to participate effectively (SOFA Team 2011).

Farmer Participation

Participation by local people in recent year has shown to be one of the critical components of the success of the programme in the agriculture sectors due to an increasing number of project analysis (World Bank, 1994; Pretty, 1995) on the farmer participation at all stage of the programme. According to Kerr (1994) and Pretty et al. (1995). "The term "participation" has been used to justify the extension of state control and to build local capacity and self-reliance. Participation has often centred on encouraging local people to sell their labour in return for food, cash, or materials. These material incentives distort perceptions, create dependencies, and give the misleading impression that local people are supportive of externally driven initiatives". Arnstein (1969) defined the various level of participation of stakeholder. Engagement of beneficiaries in development intervention in developing countries falls within (Pretty et al., 1995). The PFJ is top-down; the level of involvement of the farmers is at the district implementation stage of the programme.

Participation of beneficiaries is crucial for the different stages of project implementation (TANGO International 2009; Karugia et al., 2016). This study will focus on how farmers are participating in the district implementation stage and their perception of the programme. Questions the programme is meeting their needs, how farmers are making use of the programme. The type of input accessed considering the different category of farmers and gender needs of the farmers and gender participation in the programme.

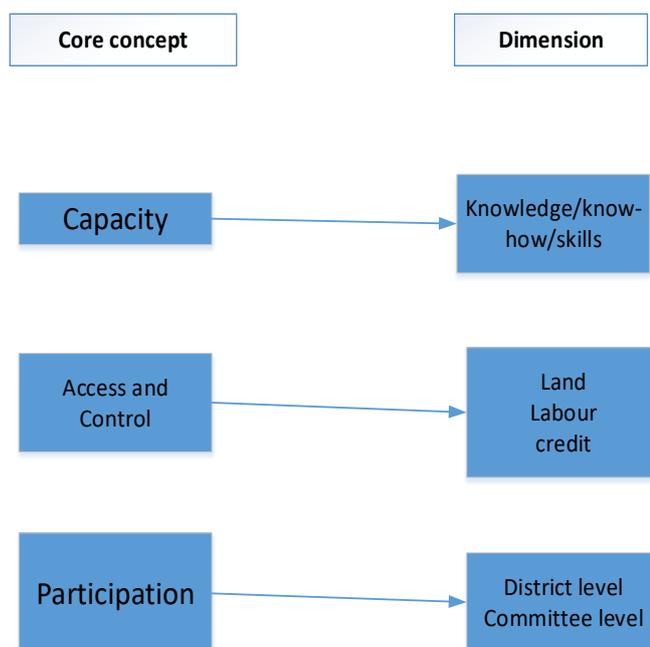
Including the needs and preferences of beneficiaries during the design and implementation of development, interventions enhance local acceptability and the long-term sustainability of the interventions (Gawler 2005; Noble 2005). Therefore, the quality of participation, which is more than merely informing the beneficiaries of what is happening or going to happen, is important (Pretty 1995; Karugia et al., 2016). Karugia et al. (2016) suggested these questions be considered in programme design and implementation; Who are the right beneficiaries to be involved? What is their capacity to engage effectively in the intervention? If their capacity is weak, what improvements are feasible within the scope of the interventions.

2.3 Operationalization of key concepts

The concept of the study is operationalised, as shown in Figure 7. This study will focus on these three concepts; Participation of farmers in the PFJ programme, Capacity of farmers to implement and Access and control of men and women to productive resources at the household level (land, Labour, Credit inputs).

This conceptual framework has been adapted and adjusted it to suit the context of the researcher.

Figure 6: Operationalisation of key concepts adapted and modified from Karugia's Framework



Source: Author, (2019)

Smallholder farmer;

In Ghana, the various definitions of smallholders are accompanied by differing estimates of such things as their contribution to the agricultural economy and incidence of poverty among them (IFPRI, 2007). Nyanteng and Seini (2000) state that over 90% of the country's food production derives from holdings of 3 ha or less.

For this study, smallholder farmer is a farmer who cultivates less than 5 acres (2 Ha) of farm size, and his or her aim of production is to feed his family and sell surplus food for income by relying mainly on family labour.

Improved Varietal Seeds and Adoption by Smallholder Farmers

Improved seeds play a very significant in improving agricultural crop yields, enhancing smallholder farmers' livelihoods and food security (Almekinders et al., 2019).

Improving crop production happens to be one of the most important strategies for food security development in Ghana, through the development and improvement of agricultural practices and availability of crop varieties (Hepelwa, 2013; (Mutanyagwa et al., 2018)).

However, these improved varietal seeds developed over the last decades, have received mixed adoption by smallholder farmers in developing countries like the case of Ghana (Almekinders et al., 2019; AGRA, 2018; Eriksson et al., 2018; Walker and Alwang, 2015), partly because farmers have different varietal needs. Smallholder needs seeds of diverse varietal and characteristics of multiple traits. This performance characteristics of plant varieties that include both the production (agronomic) capacity of the plant and

the consumption attributes of the product (Edmeades, 2003; Pacifique Mutanyagwa, Isinika and Kaliba, 2018). Many farmers still do not invest in high-quality 'certified' seed, even where such investments are seemingly available, affordable and profitable (Hoogendoorn et al., 2018).

Most breeders of improved crop seed varieties have focused on raising yields, as well as addressing drought and disease tolerance. According to Reeves *et al.*, (2002), farmers, however, perceive little significance of such seeds, stating that, the improved seeds are not designed to meet the needs of the smallholder farmer. Pacifique Mutanyagwa, Isinika and Kaliba, 2018, suggest the development of seed varieties that accommodates attributes of smallholder farmers preference. This he argues that the breeding process requires the knowledge of crop characteristics that farmers prefer. For effective breeding, farmers' preferences for varieties should be identified through researcher-farmers interactions and collaboration (Banziger and Cooper, 2001). Studies have shown an increasing trend of variety trait elicitations and preference rankings from farmers in breeding programmes (Setimela et al., 2017; Almekinders et al., 2019). Spielman and Smale, (2017) noted that turn-over and use rates of improved varieties is still and below expectation of development experts and policymakers.

Fertiliser Subsidy Programme in Ghana

Large scale subsidy programme dates back since the 1960s through to the 1980s in many Sub-Saharan African countries (Ghana, Kenya, Tanzania, Malawi, and Zambia) an attempt to boost crop productivity, particularly food crops (Dorward 2009). The input supplied to Smallholder farmers at a controlled price. According to Banful (2010), farm input utilisation increased boosting agricultural productivity in many cases but was affected by high inefficiencies arising from high administrative costs and political manipulations. Governments in the SSA discontinued the subsidy programs and introduced market liberalisation as a structural adjustment process (Crawford et al., 2006; Mabe et al., 2018). The Structural Adjustment Programme (SAP) and market liberalisation in the 1980s and 1990s, led to the suspension of fertiliser subsidy programmes in Africa, including Ghana (Mabe et al., 2018). But Mabe et al., (2018) stated that there was an increasing gap between biological and actual agricultural productivity, due to declining soil fertility and causing food insecurity in the continent. In 2006 the Africa Fertiliser Summit in Abuja was organised to address the increasing production gap. The "Abuja Declaration on Fertilizer for Green Revolution" was made requiring member countries to resolve the low soil fertility by increasing application rate of fertiliser to 50kg/ha by the year 2015. The declaration was for member states to resolve to increase fertiliser application to 50 kg/ha by 2015. Member states by the resolution were to commit 10% of the country's budget to agriculture for investment in subsidy programmes with the aims of rising productivity above 6% (AU, 2006; Mabe et al., 2018). For African countries where fertiliser subsidy has been implemented, the impacts on yield vary from one country to another. For instance, Druilhe and Barreiro-Hurlé (2012) analysed differences in average yields of selected crops between pre-subsidy period (1995-2007) and post-subsidy period (2008-2010) and observed that Ghana, Mali, Senegal, Zambia, Rwanda and Malawi had a significant increase in targeted crops. According to Druilhe and Barreiro-Hurlé (2012), fertiliser subsidy in Ghana resulted in an increase in the yields of maize, sorghum and millet and that of Mali recorded an increase in the yield of rice, maize and cotton. Research by Wiredu et al. (2015) showed that fertiliser subsidy programme in Ghana led to an increase in land productivity, but a reduction in labour productivity because more family labour was used in weeding and harvesting. The above observations are in line with the success story of some countries that have implemented similar programmes and achieved more significant results (Morris *et al.*, 2007) and Kato and Greeley (2016). Though Dorward *et al.* (2010) indicated that farm input support programme introduced in Malawi resulted in an increase of maize yield by about 54% in 2008/09, Messina et al. (2017) findings did not support this claim. The differences in the findings resulted from the different sources of data. In Kenya and the United Republic of Tanzania, though areas devoted to targeted crops increased due to fertiliser subsidy, crop yields decreased (Kato and Greeley (2016). Druilhe and Barreiro-Hurlé (2012) suggested that "the observed yield decreases could be interpreted as an indirect effect of allocating less suited soils to subsidised crops, but this cannot be tested for with the data available". Also, before and after analyses

showed that while maize, millet and sorghum yields increased in Nigeria, rice yield decreased. Burkina recorded a decrease in maize yield.

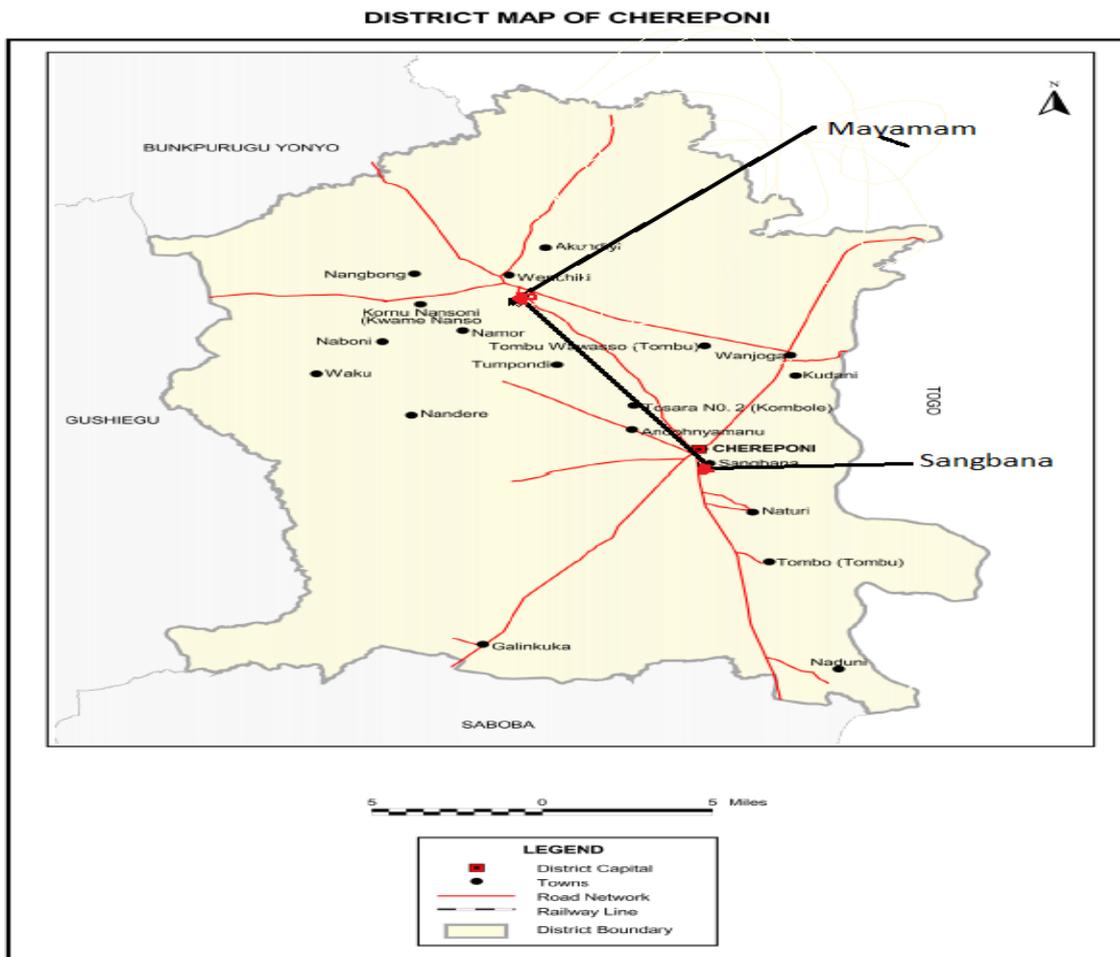
In July 2008 the government of Ghana re-introduced the fertiliser subsidy program to boost productivity for food security and to improve the rural livelihood of the country. The subsidy programme was expected to increase the fertiliser application rate to at least 50kg/ha by the end of 2011, as recommended by the Abuja summit (Banful, 2009).

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This chapter of the research describes the methodology and the design of the research. It includes the study area, research strategy, data collection tools and data analysis, data analysis, limitations and ethical considerations. The research methods are in order of how they were used.

Study area

Figure 7: Map of study area-Chereponi, N/E



Source: (GSS, 2014)

Chereponi District has a total population of 53,394, representing 5.2 per cent of the total population of the region. Annual rainfall average ranges from 800mm to 1200mm, the peak is usually between July and August. Long dry spells follow the rainy period from late October to early April. Daily temperatures vary from season to season ranging from 21 C to 41 C

Agriculture is the mainstay of the people. About 60 per cent of the land area is used for agricultural purposes. However, a greater portion is left uncultivated, and farming is mostly done on a subsistence basis with small farm holdings, which average about two – five hectares per household.

Farmers cultivate large areas of maize, yam, soybeans, millet, sorghum, cotton, sesame and rice for home consumption and surplus sold. The District is known for its leading production of soya beans and cotton (Ghana Statistical Service, 2014). The PFJ programme is ongoing in the district since 2017 cropping season. Focus crops in the area include; maize, rice, and soybeans (DoA Annual report, 2017).

Research strategy

The research employs a case study as the strategy of investigating the perception of smallholder farmers in the project district, Chereponi. This strategy allowed the researcher to conduct the study by using multiple data collection methods and tools to gather multiple sources of information.

The research is a case study which involves qualitative approach in which the researcher relied on the views of participants; asking broad, general questions; collecting data consisting largely of words (or text) from participants. The strategy enabled the researcher to describe and analyze generating themes and patterns thereby answering the research questions.

The qualitative research method was used to obtain in-depth information and a thorough understanding of the farmers' perception of the PFJ implementation in the district. The qualitative approach was chosen as it favours farmers' perspectives as necessary; thus, it limits the imposition of ideas on participants and contributing to an in-depth study for more valuable information and understanding of human experience and action. Another justification for using this method was that it is difficult to express and understand some human effects with numbers (Berg & Lune, 2012).

Data Collection Methods and Tools:

Interview guides were designed and piloted on three smallholder farmers before the researcher started with the data collection. The test was meant to find out if the interviewees will understand the questions and the type the responses, whether these responses answer the research question. Questions were deliberately designed to suit the purpose of the research, with a reason of ensuring that both the researcher and the respondents were kept on track hence would not deviate from the objectives of the investigation. Questions that need to be redesign and reframed were done accordingly. Data collected addressed the research questions concerning the perception of the smallholder farmers on the PFJ and its implementation process, identified the level of participation, identify farmers problems relevant to consideration by the intervention, reasons for participation and non-participation in the programme in the Chereponi District. The following research methods used: *interview of the smallholder farmer, Focus group discussion, Participatory Field Observation and Key Informant Interview*. In order to capture the representation of gender the researcher employed a quota sampling technique to contact 15 men and 10 women through a simple random sampling

The researcher made two visits to the two communities familiarised selected respondents for both the FGD and the Smallholder farmer interview and planned with the respondents for the convenient period of the meeting and the interview. Data was collected based on the research questions. Table 3. below describes in detail how data was collected.

Focus group discussion (FGD) is a qualitative method employed in generating a group interaction on of subjects, thereby prompting a conversation and allowing diverse viewpoints (Laws et al., 2013)., Sangbana and Mayama randomly selected from the list of communities at the DoA office by the researcher for the study. Twelve participants invite for each, but 11 and 10 took part in female and male FGDs, respectively. Their ages range from 20-60 years. This method was used to answer this question; What do male and female smallholder farmers perceive to be the problem the PFJ programme needs to address?

The researcher participated in made two visits to Sangbana and one to Mayamam before the FGD meeting. The visit facilitated the selection of respondents and arrangement of logistics for the FGD. The Sagbana FGD was held before the smallholder farmer individual interview. It helped in fine-tuning the interviews questions. A total of 2:15 hours spent at Mayamam and 2:40 hours at Sangbana. Participants used PRA tools such as a ranking matrix, seasonal calendar and problem tree and came up with their problems, ranked them and developed a gender-specific problem tree. Again gender-specific seasonal

calendar produced by the farmers. The problem ranking matrix was used to prioritised the issues raised after debating among themselves on how the problems matter in livelihood activities.

Table 2: Operationalisation of Research methods

<i>Research question</i>	<i>Data Source</i>	<i>Method/tool</i>
1. What do male and female smallholder farmers perceive to be the problem the PFJ programme needs to address?	<i>FGDs 2 (separate groups of males (10) and Female (11) Problem ranking matrix</i>	<i>Seasonal calendar Problem tree analysis Topic guide (Checklist) Flipchart, and marker. Audio & Video recorders Card papers, stones</i>
2. Who are the farmers who participate in the PFJ programme?	<i>interviews guide (25 smallholder farmers= 15male (18-60 of age, 10 females (18-60 age bracket)) Key informant 3 (1 input dealer, FBOs network Chairperson and One Market Aggregator</i>	<i>Interviews guide Observations guide Note pad Camera</i>
3. How are the farmers participating in the PFJ programme?	<i>interviews (25 smallholder farmers= 15males (18-60, 10 females (age bracket of 18-60 years)) Observation</i>	<i>Interviews guide Observations guide Note pad Camera</i>
4. What are the reasons for their way of participation in the PFJ programme	<i>Semi- structured interviews (25 smallholder farmers= 15males (20-60, 10 females (20-60))</i>	<i>Interviews guide Observations guide Checklist Note pad Camera</i>

Source: Author, 2019

Interview; An interview guide developed and conducted on twenty-five (25), smallholder farmers. The interview guide was developed in line with these three-study question below;

1. Who are the farmers who participate in the PFJ programme?
2. How are the farmers participating in the PFJ programme?
3. What are the reasons for their way of participation in the PFJ programme?

Two communities (Sangbana and Mayamam) were randomly selected from the list of villages in the district with a programmable calculator obtained both from DoA by the researcher. The communities were homogenous in characteristic and practices. Twelve respondents (7male, 5 Female) and 13 respondents, (8 male and 5 female) were conveniently selected based on their readiness and availability for the interview in Mayamam and Sangbana, respectively. Interviewees were between the ages of 20-60 years. The average interview section was 50 minutes. All the interview sections took place in the homes of the respondents. It created a free, flexibility and good rapport with the respondents most notably with married women for trust and the husbands not to feel doubtful of the interview. Also for them not to think the interview was about them.

The participatory observation was used in this study. The researcher interacted with the farmer, asking a question and seeking the meaning of observed features. A transect walk conducted on smallholder farmers' farms to gather supportive information by way of the view of the features and production practices. Three male and female farmers were picked at random during the FGDs section observational visit to their farm. 1 Ag Input shops in the district visited, records of inputs available noted and followed on the mode of access to subsidised input by the beneficiaries. The observation was extended to DoA warehouse to catch glimpses of the improved seeds wasting in the store. The researcher took photos as a piece of supportive evidence during the observational study. This data collection tool, in addition to the FDG and interviews, gave a better overview of the smallholder farmers' agronomic practices and the input access processes in the study area. Two rice fields, one male and female farmers farms, two soybeans, One female maize farm and a male sorghum farmers field visited. The participatory observation method with checklist gave the room to observe and seek clarification. Land preparation methods (heavy reliance on tractor services), time of planting, planting techniques, cultivated crop, crop performance and pest influence were the things observed.

One input dealer, the Farmer Based Organisation network Chairman, were chosen as key informants for the study. Their selection was on the grounds of triangulating the data and seeking a better understanding of the issues raised during the interview in formulating concrete recommendations to the DoA, the commissioner.

The Agro-input dealer provided information on the supply of certified seeds and fertiliser to farmers under the PFJ program. The FBO network chairman answered questions on how the farmers and the FBO are participating.

The aggregators provided information on the marketing of produces under the PFJ in the district.

3.4 Data analysis

Qualitative data was collected. The quantitative data were entered into Microsoft Excel and analysed into graphs, charts and table to describe the characteristics of the respondents. All the interview questions were asked in "Chokosi" the native and common language in the study area. Audiovisuals were used for data collection. The recordings later transcribed into words and sorted under codes, categories and themes based on the research questions.

Structuring qualitative data into themes under the conceptual framework made it much easier for the researcher to categorise the type of responses, contrasting views, opinions that differed from the main themes identified for clarification. The quotes from the respondents were quoted verbatim for the originality of the source

3.5 Ethical Consideration

The researcher explained the relevance of the study to the respondents before their participation. They were assured of the confidentiality of the information they provide and hence, respondent protection from harm. The researcher sort permission from husbands of married female respondents as a way of observing protocol and their availability for the interview. No objection received. It was explained to them that partaking in the study was voluntary, and they were permitted at any time to exit the study if found necessary. The researcher sort permission before recording and took pictures of them. Recordings, pictures and other relevant data were carried in the personal bag of the researcher for data image protection.

3.6 Study limitations

The research employed a small sample size, and therefore, the findings may not be a total representation of the situation in the entire district but provide valuable insight into how the smallholder farmers in the district perceive of the planting for food and Job programme is implemented

CHAPTER FOUR- RESULT

Introduction

This section represents the result of the field study. The results are presented according to these research sub-questions.

1. What do male and female smallholder farmers perceive to be the problem the PFJ programme needs to address?
2. Who are the farmers who participate in the PFJ programme?
3. How are the farmers participating in the PFJ programme?
4. What are the reasons for their way of participation in the PFJ programme?

What do male, and female smallholder farmers perceive to be the problem the PFJ programme needs to address

In order to understand the problems perceived by smallholder farmers as a problem that PFJ has to consider and address, the student researcher employed Participatory Rapid Appraisal tools during two FGDs meetings. The tools used were problem ranking matrix, problem trees and seasonal calendar. The section saw participants ranking the identified problems and translating them into a problem tree. The seasonal calendar as the male/female showed how gender farmer activities fit into the PFJ programme

Female farmers problem

During the FGD of women farmers, they identified the issues affecting them as farmers in the district, ten (10) issues were listed. The women debated among themselves on the significance of these list to the participation in the programme. Later reduced to five the women, based on their severity as perceived by the women, and these were; lack of tractor service for women farmers, limited sources of financial capital (Money), limited access to productive land resources by women, soil infertility and an unreliable market for farm produce in the district.

“PFJ to us is mainly for the men as we have limited access to productive land for farming. Land is very scarce here for even the men too. I think if the government can add credit component for us the women, it would help in venturing into other livelihood activities” by F2 and was applauded by the participants.

The study shows that women farmers in the area have limited access to productive land resources which is one of the crucial challenges to them. They added that, sometimes, they hardly get access to fertile land for cropping. It was much surprise during the ranking of the issues land was not top ranked. Reasons were that it is something projects have not much influence in this current space of time. They maintain they are limited in going into competitive agricultural production as the highest cultivable land for a woman was

2 acres and mostly female-headed households

PRA tool, a ranking matrix was used by the women to rank their five highlighted issues. The limited source of financial capital (income) by women farmers ranked in the at the top, and soil infertility was ranked at the bottom. The women ranked the issues indicated in Table 4.1 below, one (1) being the highest and five the least priority.

Table 3: Female problem ranking

No.	Problem	Ranking
1	the limited source of financial capital (income)	1
2	Inadequate land for women	2
3	Lack of tractor service	3
4	Unreliable market access	4
5	Soil infertility	5

Ranking matrix 1-5, 1 is the highest and 5 is the least

Source: Field data 2019

Problem tree of women farmers

Participants at the FGD based on the outcome of the ranking matrix developed a problem tree of how women situation looked. As identified by the ranking matrix, the main problem was the income for women farmers. For the causes of the limited source of financial capital (income), they mentioned low crop yield, poor market access, storage challenges, low assets base, and limited credit facility for them as women.

According to the women, their limited source of financial capital (income) status was caused by low yields of the crops. They lamented soils are weak in soil nutrient to support plant development. The women maintained that due to the limited land, their priority crop is soybean. The special fertiliser for legume (Yara legumes) they stated is not covered under the PFJ. Again, the outbreak of Fall armyworms on their crops, the effects of a parasitic weed-Striga, drought, inadequate rainfall and poor farm management were other factors affecting the yield of their crops.

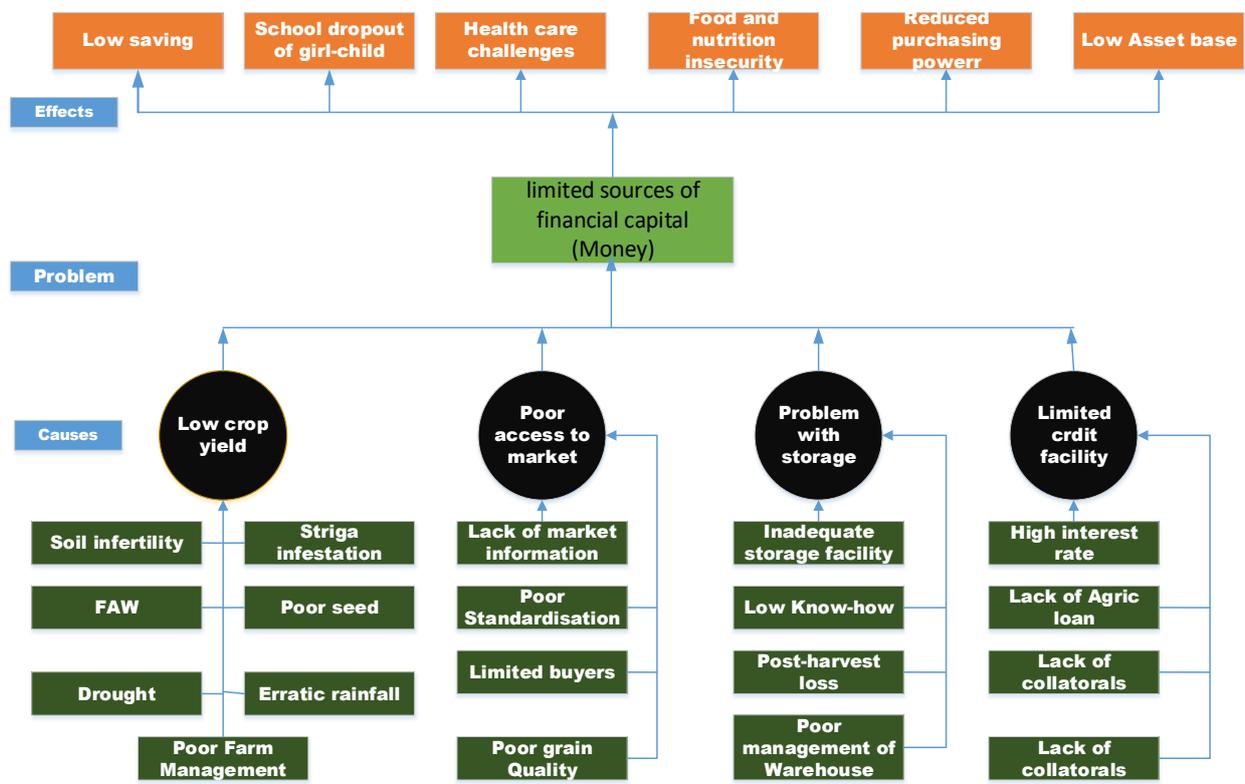
Another reason their limited source of financial capital (income) status was deprived access to the market. The market they cited is pivotal in the production chain. Moreover, markets thrive on market information on the available buyers, price and market locations. Absence buyers have caused the few buyers to overlook standard weights of measurement. Alternative market sources to them come with a better price for produce, but the opposite is the scenario for the farmers. A Female F1 lamented that,

“Sometimes, when these buyers come, they offer any price they want. They know we have no information in prices, also the distance to travel is far and we are not certain of the reliable buyer there, we are compelled to accept their price offer. The annoying part is that their weights of measurements are heart-breaking. We have decided not to measure our produce again”.

Besides, women farmers highlighted that they had limited access to credit facilities to finance their farm activities. Credit facility from the banks requires collateral security as such, and the interest rates are very high for them. The groups said agriculture loans are non-existing as policies by the government have not prioritised agriculture loan to farmers. The district has only one Private rural bank and one cooperative credit union. The interest rate is around 36% for eight (8) months period.

The group explained that limited source of financial capital (Money) affects their ability to save, they grieved they are unable to support the men in educating their children and in the worse situation the girl child dropout. The condition further aggravates their ability to access proper health care service, food and nutrition insecurity as they are unable to supplement their dietary needs and reduced investment opportunities, as shown in figure 1.

Figure 8: Female Problem tree



Source: Ahlidza (2019)

Figure 9: Women developing their problem during FGD section



Source: Ahlidza/Field data, (2019)

Male farmers problem

Out of the 12 participants invited for male FGD at Sangbana 10 were in attendance. The other two travelled out of the district. The group accordingly called these problems faced by them as farmers; low crop yield, Striga (parasitic weed), issue of Fall armyworm, persistent drought, erratic rainfall and soil infertility. The group with the researcher's facilitation used a ranking matrix to rank the issues in order of significance to the farmers as shown in Table 2

The group explained the farm for the subsistence of the family and sell a surplus for income group mentioned that the other issues are paramount as well, but their effect is on the yield of crops. The participants believed that other factor could be managed to achieve good yield with good know-how. Hence their aim of top-ranking the low crop yield.

Table 4 : Problem Ranking Matrix of Male Farmers

No.	Item/issues	Ranking
1	Low crop yield	1
2	Erratic rainfall	2
3	Soil infertility	3
4	Drought	4
5	FAW	5

Matrix scale 1-5, 1 is the highest and 5 is the least

Source: Field data, 2019.

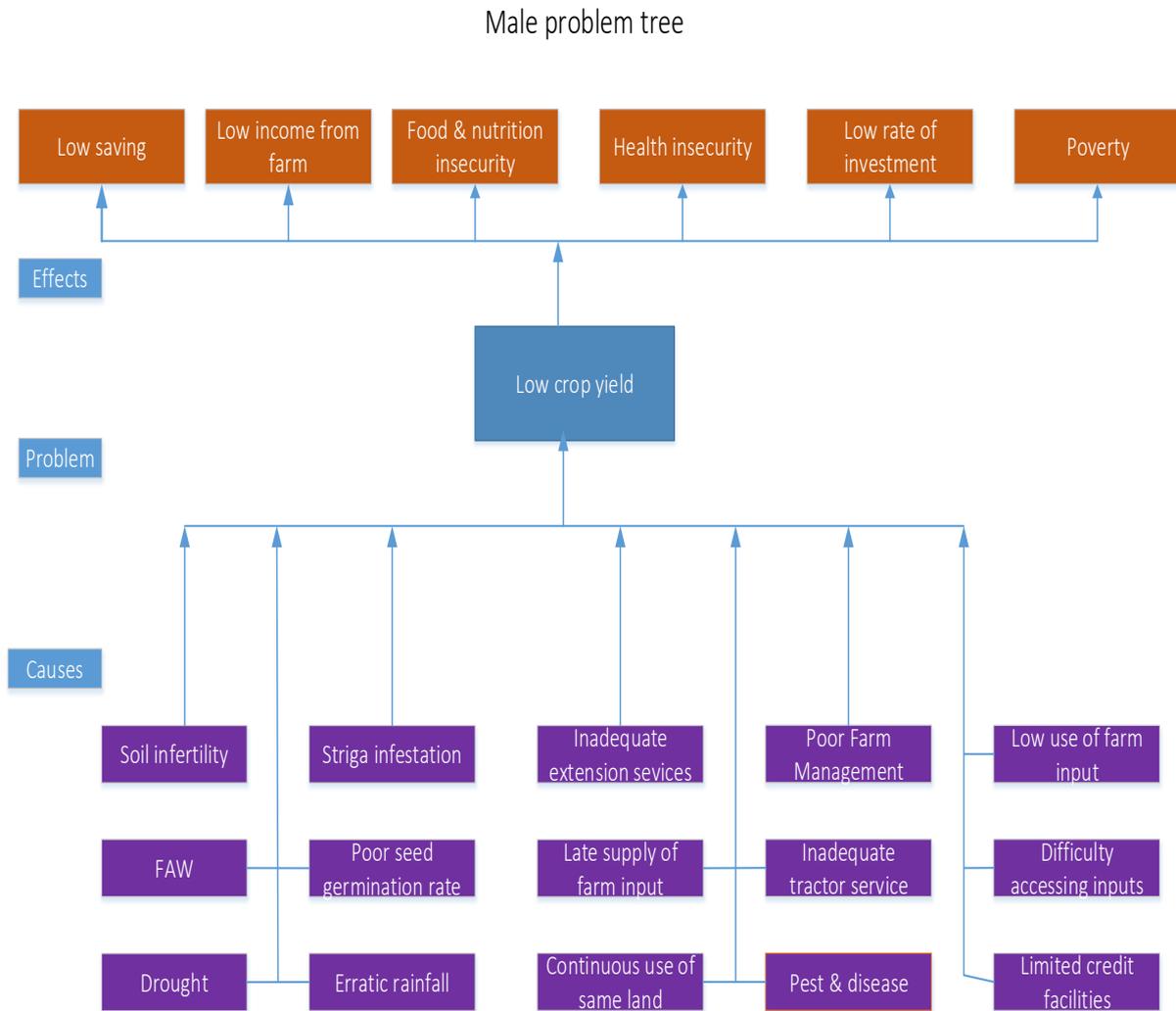
Problem tree of male farmers

During the male FGD, the participants translated the outcome of the matrix ranking into a problem tree. The problem identified and prioritise was low crop yield from the ranking matrix. The low yield is the consequence of anthropogenic and natural factors. The anthropogenic factors are human-induced such as the type seed, the land preparation methods, the planting time, weed management, soil amelioration practices and post-harvest management, late input supply. The Natural conditions were erratic rainfall, drought pest and diseases. Farmers operate in a multi-complex array of challenges on their farm

As shown in figure 2 below, the farmers indicated that these factors such as soil infertility, FAW, prolonged drought, Striga, erratic rainfall influenced the low crop yield. Other influences are inadequate extension services, late delivery of PFJ inputs limited tractor services in the district, low/high use agrochemical and limited credit facilities. The group explained that the root causes are many and complicated to handle

The outcome of low crop yield from the farm negatively affects the family income from the farm, the household food, nutrition security base impacted deleteriously as well as health security status of the family. Furthermore, there is a reduction in the ability to invest in farming development of the human resources capital and poverty.

Figure 10: Problem tree of male farmers in Chereponi district



Source: Ahlidza (2019)

Figure 11:Facilitating men's FGD s at Sangbana



Source: Ahlidza, (2019)

Seasonal Calendar

In order to look into what male and female farmers perceive to be the problem PFJ needs to address, the researcher used a seasonal calendar as PRA tool to understand the farming needs of the male/ female farmers, in terms of timing, different input needs and situated them in the PFJ implementation in the district. This was to identify bottlenecks in the implementation and smallholders' farmer participation. The participant sketched their farming time, and social activities carried out in the year. Figure 3 displays the sketch and the content explained in detail below.

According to both male and female FGDs, farmers mentioned that farming is seasonal and time bound. The participants added that they received subsidised fertiliser and improved seeds late after the optimal planting time, as indicated in the calendar (fig 3). Any delay in the timely distribution of subsidised input to beneficiary farmers affect the production cycle due the monomodal rainfall pattern in the north and further affects the starting times of planting and harvesting for male and female farmers.

According to the calendar, the productive planting time for both male and female in the district is between Mid- May to mid-June while PFJ input distribution starts in June ending.

Considering the monomodal nature of rainfall in the north, the women said they start nursery activities for vegetable production in mid-April with the first rains while the male said the stumping new field begins. The man maintained during the discussion that cropping of long duration crops (yam, cassava, rice, soybeans) start in mid-May. Women, on the other hand, crop soybean, groundnut and *Neri*. Planting of maize, millet, sorghum, sesame and cowpea (late maturing cowpea) commence in Early June. Whiles short duration crops sesame and cowpea (short duration) are cultivated in August. It emerged during the FGDs that the rains come late, erratic and end early which the PFJ programme has not made an adjustment to cater for the change in rainfall pattern for selected crops, cereals (maize, rice, and sorghum) and legume (soybean). Most farmers prepare lands towards early May to take advantage of the rains in mid-May. Planting of prepared fields can only be done, when input such seeds are available and accessed by the farmer.

The discussions show the PFJ inputs arrive late in June, forcing farmers to use their seeds for planting. Farmers who cropped cereals early miss the basal fertiliser application time.

“Ah! The government claim to be helping us but rather worsening our situation. The delay in the inputs delivery is now a norm, we are farmers, and we deal with time yet year after year inputs delay. As we talk now, my early maize is at knee level. Am supposed to be top dressing with Sulphate of Ammonia and yet not even NPK is on the market. We are in July”. By male farmer F1

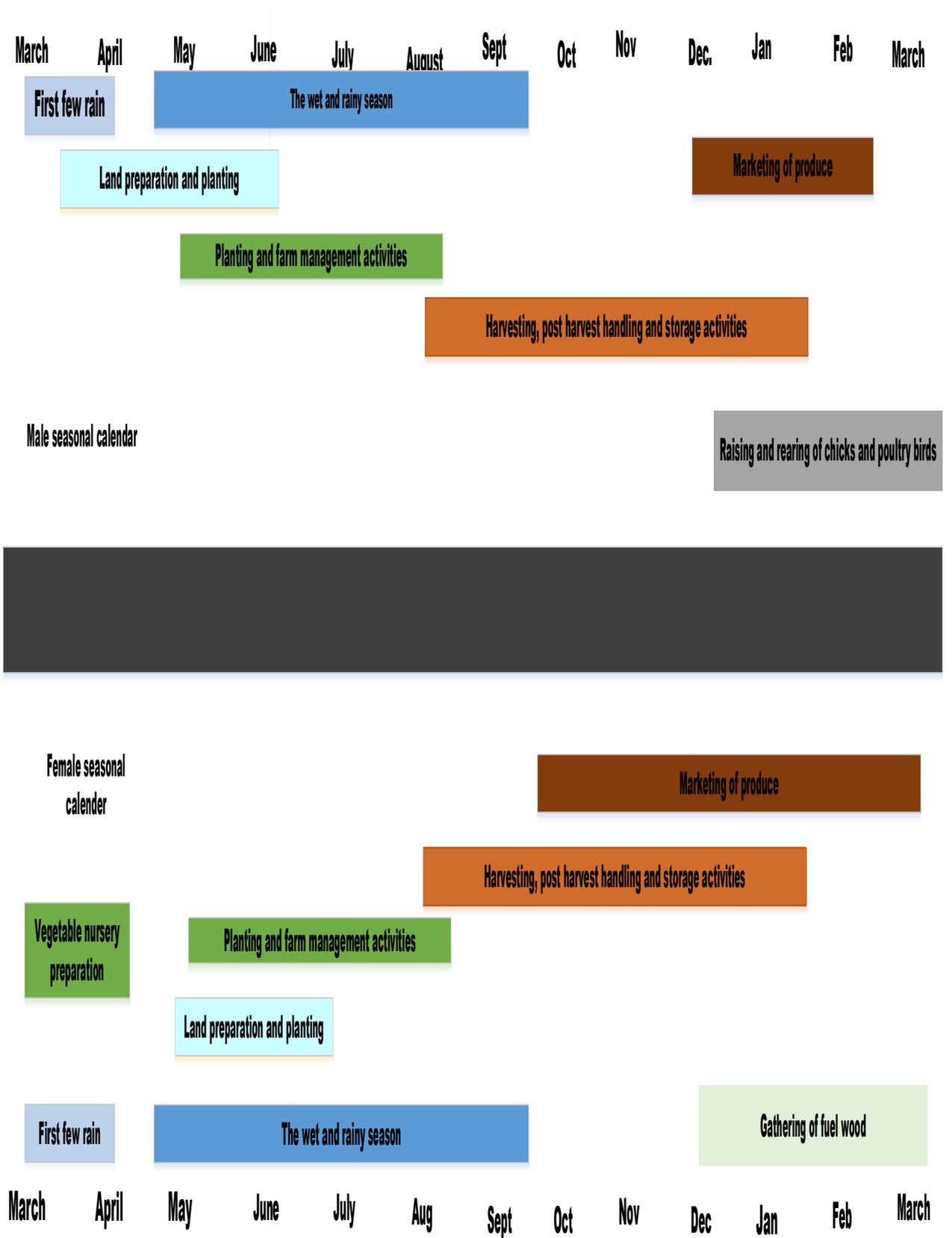
According to farmers, Agricultural extension staff encourages the early application of first basal fertiliser at planting or 10-14 days after planting for nitrogen availability in the soil, root growth and healthy plant development.

Figure 12: Participatory observational visit to male and female farmer's farm



Source: Ahlidza, (2019)

Figure 13: Male and Female Seasonal calendar for farmers in Chereponi District



Source, Ahlidza, (2019)

The farmers who participate in the PFJ programme

Participation based on farm size

The interviews with farmers revealed that PFJ programme caters for farmers with land size between 1-5 acres. It was further explained by the farmers that the maximum input a participating farmer can acquire under the programme is 10 bags of NPK and 5bags of urea fertiliser for 5 acres. According to the interviewees, the farmers' crops and the number of inputs that programme caters for are summarized in the table below. Out of the 25 respondents, 23 of the interviewees were smallholder farmers. Their land size ranges from 1-5 acres. Two of the respondents had over 10 acres of the cropped area but accessed input only five acres under PFJ programme. They mentioned buying fertiliser outside the subsidy price of GHS 56.00 to cater for the extra five acres. The data shows the average cropped area for male farmers ranged from 2.5 - 5 acres. However, the youth and females respectively had between 1 - 2 acres of land under cultivation.

"Agriculture lands have become fragmented with the growing population, and we the women are at a disadvantage. We grow virtually everything crop on an acre piece of land" respondent 13

Table 5: Quantity of inputs per the unit of land under the PFJ programme

No	item	Inputs/acre	inputs /5 acres
1	Maize	9 kg	45 kg
2	soybeans	15 kg	75 kg
3	NPK Fertiliser	2 bags	10 bags
4	Urea Fertiliser	1 bag	5 bags

Source: Field data (2019)

Figure 14: Researcher conducting smallholder farmer interview



Source: Ahlidza, (2019)

Participation based on the crops

The in-depth interview reveals that farmers who are participating in the PFJ programme in the district farm any of these selected crops millet, sorghum, maize, rice and soybeans. Further, they mentioned, farmers cultivate two or more of these crops in addition to other crops such as groundnut, Fonio, Bambara nut, sesame, cotton, cowpea, cassava and yam. During the participatory observational visit to the DoA office, PFJ officer mentioned without evidence of these crops; farmers can not benefit from the fertiliser subsidy. However, the interview reveals that some farmers participated by accessing the fertiliser for other crops. Two of the male respondents mentioned that they obtain the fertiliser but fertiliser their cotton farm instead of the maize for which they accessed the input.

Figure 15: Beneficiaries during the Participatory observation visit



Source: Ahlidza, (2019)

Participation based on gender

In order to capture the representation of gender the researcher employed a quota sampling technique to contact 15 men and 10 women through a simple random sampling

From the interview, the result reveals women, men and youth are participating in the programme. The interview shows men, women and youth cultivate maize, rice and soybeans. however, women tend to

Figure 16: Female beneficiaries during a participatory observational farm visit



Source: Ahlidza, (2019)

How are the farmers participating in the PFJ programme?

In answering this sub-question, the researcher focused on the ways, form and the process by which the PFJ farmers participate. The response looked at the individual farmer, groups of farmers and Farmer Based Organisations rep are involved in the decision-making process at the district level.

Participation at the District Technical Committee level

Finding from the research shows there is farmer participation in the implementation PFJ at the DTC level in the district. The PFJ structure allows farmer participation at a different level. At the DTC level farmers are represented by the Chairman of the FBO network. Some respondent during the study raised a concern about their representation. Some did not know the channel of communication to the DTC. The absence of communication platforms within the communities for channelling concerns for discussion was a challenge. According to Chair, the DTC is self-funded and is unable to coordinate the participation farmers effectively. The limited source of funds for activities is a significant challenge for the network to effectively hold meetings with its members for better representation at the DTC level.

Participation through individual farmer registration

The study shows that most farmers participate as an individual farmer in the programme.

Farmers have different needs and preference in the application. People participating as individuals want to be responsible for the decisions, action and the outcome. Farmers mentioned that they participate as individuals by walking into the Department of Agriculture to register for their interest in the programme. The process of registration greatly influences the level of participation by the target beneficiaries. Farmers said getting to the DoA office was very tiresome for them. Distance communities were out of reach by the AEAs due to logistical constraints. They register for the package they are interested in; however, they further indicated that in the district, the available package is the seed and the fertiliser. A coupon is issued to the registered farmer to make payment and claim the package from the designated input shops in the district.

Participation byways of groups.

Some farmers are participating in the programme through their farmer's groups. Collective purchase of subsidized fertilizer is the typical way some farmers gain access to participate in the programme. One farmer lamented that; several attempts made by him failed as he could not get the coupon from the AEA. Finally, he purchased the input by the assistance of his wife through their group's collective purchase of the inputs. Farmers cited, saying this form of participation is very convenient for them than following long queues as individuals.

Through the nucleus farmer system

The study also revealed that another way they could participate in the PFJ in the district is by the nucleus farmer system, whereby farmers are registered under a nucleus farm and claim the subsidy the farmer. This farmer also revealed the find this system convenient in claiming the subsidy as they explained that, it is cost and timesaving.

"It was previously difficult for us as women farmer to get access to tractor for farming but with this new nucleus farmer arrangement, access to a tractor, subsidised input and market has become easy for us".
(Respondent 16)

Services provide register and put mostly women farmers into groups of 15 and provide them services such as tractor service, seeds on request, and a market for them. Payment is made in kind with produce after harvesting nucleus farmer. The nucleus farmer with end-market purchase the remaining produce from the farmer. Monitoring of the activities and services provided may be required, and also training be provided in form extension service to the farmers.

Awareness creation and sensitisation meetings.

AEAs use the meetings to address concerns raised by farmers at sensitisation meetings sections. The PFJ officer mentioned that due to the change in the yearly implementation strategy by the government. The AEAs conduct community awareness creation and sensitisation meetings to educate farmers on the strategy changes and the opportunity to recruit new farmers to participate in the programme. The in-depth interview revealed issues of the time and channel of communication of the meeting not being appropriate. Recommendations by the respondents were that the community chiefs, groups leaders, religious leader, assembly members and unit committees should be included in awareness programmes. The initial implementation stage was challenged by the inadequate staff of the DoA in 2017; currently, the DoA has AEAs staff strength of 20 as against the previous number of 5 AEAs. Areas were vacant had no staff at the post, providing extension service to farmers. The new staff strength of the office provides a base for the smooth implementation of the PFJ programme in 2019 and recruiting new beneficiaries. The in-depth interview confirmed the new era of extension service delivery of the office when a farmer is quoted as saying "I see the officer making a frequent visitor to this community, but that was not the case, he was hardly seen in the village before. Staff have been resourced with a new motorbike to facilitate their movement in the community.

Extension Service delivery.

Extension service is one of the pillars of the PFJ programme. The provides farmers with innovative technology for enhancing production. The in-depth interview revealed that farmers were challenged with extension information and knowledge gap in production, some farmers lamented of officer's absence from the communities and difficulty in getting him. *"The fall armyworms have infested my maize, destroying the entire farm. I have not seen the officer in the community for almost two weeks now. A friend told me the government has released chemicals for the control of the pest. I travelled to the office, and I was told to contact the office for my area. that he has to visit the farm, provide details of the farm for the pesticide to be released to me"*

The study revealed 20 of the respondents participated in extension service training meetings this year 2019, some participated in the demonstration on low land rice intensification programme.

The respondent said it has restored their hope in the service and provided a new direction for embracing innovative agricultural practices for productive enhancement of the crops. Some recount how this service has helped in salvaging FAW infested fields. An extension is seen as a driver for enhancing agricultural production in the country.

Figure 17 Extension delivery training



Source: Ahlidza, (2019)

What are the reasons for their way of participation in the PFJ programme?

Reasons for participation and non-participation

Farmers participating in the program gave various motivations for their participation; these were ease of accessing input, reduce cost and availability of fertiliser, extension service support by way demonstration. They gave reasons that suggest yields of their crops improved, own seeds susceptible to Striga (parasitic weed) causing total crop failure of cereals and frequent extension visit.

“I see the extension officer visiting the community and holding farmer meetings every week, but before that, I hardly saw him in the community”. Respondent 15

Farmers 14, noted the PFJ programme had reduced the pressure of securing inputs in the open market, which was very expensive. Farmers mentioned during the FGD section, how farmers are saving extra money for other productive activities such as the hiring of additional farm labour. Farmers before the subsidy hardly made any good harvest but maintained that yields of maize and rice have increased. Though yield margins increased, their productions are still affected by pest and disease, drought, erratic rainfall and post-harvest losses and calls for more extension support.

Based on the gender, the responses from the females were that the soybeans improve seeds give a better yield than their own mixed seeds, they had extension support in the form of demonstration and innovative technology transfer. Their mode of participation was through farmers groups in the village. The males, on the other hand, had these as reasons for participation in the PFJ, the fertilisers and seeds are affordable, major crops (maize, rice, sorghum and millets) grown are covered by the programme. Input is available once coupons are issued, ease process of acquiring the input the previous year 2017. FAW chemicals were available for beneficiary maize farmers. Provided the opportunity for obtaining input for other crops not covered by the programme.

However, these other reasons for not participating were mentioned by both males and females respondents such as poor seed germination rate most especially the soybeans and hybrid maize. The issue of the late supply of the subsidy input was topical during the interview. Others reasons were elite and political control, DoA officers of concealing the coupons and input diversion by the dealers.

The female farmers mentioned that there was no sensitisation and awareness programme for them as females, hence they lack information on the programme — also no fertilizer for soybeans on the programme. Moreover, most of the women crops (Bambara nut, Sesame, 'Neri' and groundnut) are not covered. The process of accessing the input is not women-friendly.

Figure 18: Fall armyworm infested fields of a farmers



Source: Ahlidza, (2019)

CHAPTER FIVE DISCUSSION

This chapter entails detail discussion of the result presented in chapter four by way of triangulation with literature and interview, observation, Key informant interview and FGD.

5.1 The Main findings

The PFJ programme identified low usage of inputs (improved seed and fertiliser), extension information gap and limited market access for farm produce. The policy document was centred on enhancing farmers access to subsidised inputs, adoption of improving agricultural practice. Agricultural extension services as a driver for accelerating agricultural technology transfer to smallholder farmers for enhanced farm productivity and creating access to a private-sector lead input-output market for the farmers.

Participation in of smallholder farmers in the pillars is low except in subsidised fertiliser pillar that patronage through inputs came late yet run short. The subsidised seed was not patronised as seeds got rotten in the DoA stores. It could be due to the lateness, or the varietal needs of the farmers were not met. The later confirms literature on low seed adoption rate in Ghana Almekinders et al., (2019), AGRA, (2018), Eriksson et al. (2018) Walker and Alwang, (2015) which states farmers have different varietal needs. Smallholder farmers need seeds of diverse varietal and characteristics of multiple traits. The performance characteristics of these plant varieties include both the production (agronomic) capacity of the plant and the consumption attributes of the product. Some of the improved varieties though come cheap but require high fertiliser input this also supports the study of Hoogendoorn et al., (2018) cited as many farmers still do not invest in high-quality 'certified' seed, even where such investments are seemingly available, affordable and profitable because some come with additional resources.

Participation of smallholder farmers in the PFJ implementation in the district by way of representation was at district management level. Participation of smallholder farmers in productivity-enhancing programmes is key for the success and sustainability of it. Farmer participation at all stage of the programme from problem identification to an implementation promotes ownership among stakeholders.

Nucleus-farmer system (contract farming) is an emerging way of targeting smallholders for an end market of commodities. It is gaining much prominence in the district for women farmers with major issues accessing mechanisation service. It is a way of helping smallholder farmers with land but lack the capacity due to credit, input and mechanisation service to go into production. The research could not explore much into it.

The findings show that PFJ input come, but farmers complained of the delay of the inputs which does not meet their production time, forcing farmers to use their seeds for planting. These seeds are unimproved and susceptible to biotic and abiotic factors resulting in low yield. Besides, planted crops mostly cereals miss the first basal fertiliser application time, which can lead to low use. This confirms what is reported literature on timely application of fertiliser by Hammad et al. (2011) . Sawyer (2008) as cited Kapemba et al., (2017), that the late application of nitrogen-based fertiliser leads to nitrogen deficiencies in the soil and hence reduction in cereal yield. Sometimes over usage of the fertiliser occurs, leading to a condition called luxury consumption/growth (the plant gets more nutrient than is required, develop more vegetatively but does not translate in yields). The situation late input delivery is discouraging to farmers, shaping their perception about government interventions targeting farmers and implications on participation in future programmes.

Targeting in development projects if not done well, can limit the intended beneficiaries from participating. PFJ targets all smallholder farmers in the district interest in maximising the productivity of their farms. This category of farmers PFJ has place restriction on crops beneficiary farmers can grow. This is seen as discriminatory, not all smallholder farmers cultivate these crops (maize, rice, sorghum

and soybeans). Smallholder farmers in the northern part of Ghana are noted to cultivate wide range crops which as an insurance against crop failure and for food preferences. This has also affected farmer participation in the programme, as many of these crops are not covered and is cutting away more participants.

Women and youth participation in the programme is low because genders needs were not considered during the problem identification stage. This has affected the targeting of the right beneficiaries, the right commodity for male and female, other production needs for the youth and women such as access to and control of land, tractor service. The female priority crops were not covered by the programme due to their restriction on the crops. Women up north are noted for the cultivation of groundnut, Neri, cowpea, vegetables and Bambara nut. The cultural difference in the north and the south could also be a factor. Women in the south compete with their male counterpart in the cultivation of all crops while women in the north are restricted certain crops noted as women crops. This has an effect on the sustainability of the planting for food and Job programme in the district.

Agricultural extension information and knowledge gap among farmers in the district and the DoA is found to be wide. Farmers since the inception of PFJ have not fully informed on the programme, the packages involved and the implementation strategies. It was not surprising when farmers did not know of the packages and some thinking the programme was about seed and fertiliser. Though some mentioned participating in the sensitisation meetings but could not recount what the discussions were. Some farmer lamented of officers' absence from the communities and sometimes the difficulty in accessing agriculture information. The programme can not achieve its objective without improvement in extension delivery.

The low nature of agricultural extension service delivery culminated from an inadequate number of professional staff at the districts to implement the interventions, inadequate logistics and inadequate in-service capacity development training for staff.

Marketing in Agriculture entails the services and function relationship between input and output of agricultural goods and services. It involves market players to facilitate the flow of goods and services(input to farmers and the output from farmers). Under this pillar, MoFA/ DoA is to strengthen input and output markets through the promotion of partnership between farmers, nucleus farmers, aggregators, input dealers, farmer-based organisations (FBOs) and private sector agribusiness production units in the district to facilitate the chain and to create market demand for produce.

Open end market for farm produce raises farmers confidence in production and provide good returns on investment.

The input market is which entails the supply of seeds and fertiliser to farmers is functioning in the district. However, much can not be said of the output market for farmers. Producers access the open market for the sale of farm produces due to absence a reliable output market in the district. The open market offers less price for farmer produce. There is no market standards measurement in weight for farm produce at the open market, it opens farmers up for cheating by buyers and subjects them to seasonal effects of price volatility, a major challenge of farmers in the district. In the marketing system of agricultural production, market intermediary middleman pockets a lion's share of the hard-earned income of the farmers. Poor means of communication, dismal awareness of market news, debt burden and poverty, reduce growers bargaining ability compelling them to sell their product with a free land.

5.2 Role as a researcher

My role as the researcher with some fore-knowledge on the research area enabled me to develop my concepts of operationalisation especially with what indicators to look out for in the field, and this helped in my data collection and putting together my report. As a researcher, the researcher was challenged with coming up with a compelling research work that will contribute to the successful implementation of the PFJ programme for the well being of the farmers in the district. Also, to provide research that will be useful to the commissioner and deliver valuable secondary base information for development partners coming into the district.

During the pitching of intended research topic, the researcher was advised on his chosen topic of Village Savings and Loans Associations (VSLA). The reason was that the immediate past student had carried similar work. The researcher changed his focus on the VSLA to Planting for food and Job programme implementation in the district upon consultation with his commissioner.

On the day of the Proposal defence, the research focus was seen to be unethical for wanting to study his colleagues and more conflict of interest, which could influence the result. The topic was realigned that affected the entire work. The researcher learnt the need to be open and flexible to external feedback from professionals and to anticipate changes in the course research work.

The researcher recruited assistance from the different community to assist him with data collection. This was to reduce too much familiarity, which can influence the result. We made two visits to the communities and met with the focal person to assist us in recruiting people for the research. The researcher began first with the one focus group discussion to get on the response and the direction the interview will move.

On our returned, the researcher began his analysis of the responses, and then the researcher realised some of the responses were not answering the research question well. The researcher then thought over it and asked what step to take next, and upon reflecting further, the researcher decided to do the interviews with the Smallholders as a way to check the authenticity of the results from the first FGD. The second FGD followed after the interview. More clarification was sought during the Key informant interview with Input dealer and FBO Network chairman. The researcher made the participatory observation visit as the last in a way to crosscheck with the various responses. Though not planned the visit took him to the DoA store, discovered there bags of seed rotten and weevil infested.

The element of self-awareness of my biases as research in a familiar setting was confronting to me going into the field. First, I added a neutral hand to assist with part of the data collection. I relied on the long trust established with them and also pressed on them to share with us the information as they stand to benefit from the outcome of the work.

The tools I employed as part of my methodology were thoroughly thought through to ensure I can get the needed data, and should there be another round of research, the results should be similar. Moreover, that is why the student employed triangulation in this research.

The research was conducted in the same environment the researcher works. The research had a mandate to deliver to his boss a finding on how PFJ implementation could be improved in the district and at the same time to provide quality for work as an academic requirement. The researcher was torn between a conflict of interest in research setting on reliability bias and a job duty which can affect his future engagement at work upon completion should he fail to deliver to the boss. In an effort to reduce biases, the researcher engaged assistance out the DoA and trained him to assist in data collection. The researcher, on his part, told the respondent they stand to benefit from the work, the department has identified a gap in the PFJ implementation which the office wants to address. Also, the researcher assured them of confidentiality of the information they provide. The researcher told them was there as a student to learn from their experience and that the study can yield a good result that will benefit them at the end of the study.

In the course of the data collection the researcher saw the need to adjust and realign the operationalisation of the conceptual framework used. Some of the dimensions became irrelevant during the analysis of the data collected.

Some respondents had tight schedules with their daily farm activities, and sometimes, the student researcher had to wait until they returned from the farms before our engagements could commence. Some had to be rescheduled for another day.

CHAPTER SIX CONCLUSION AND RECOMMENDATION

The objective of this study was to assess smallholder farmers' perception of the PFJ programme in Chereponi district in order to give recommendations to the Department of Agriculture for implementation.

What do male and female smallholder farmers perceive to be the problem the PFJ programme needs to address?

The females in the district perceive financial capital to be the main problem that PFJ should address because they think the issue of poor storage of their products, and poor market access, low yield and limited access to credit facility limited their assets base hence, are not able to engage in alternative livelihood activities.

The male farmer, on the other hand, mentioned low yield as their main challenged the needs to be addressed by the PFJ programme. The mentioned that their low yield is as a result of soil infertility, pest and disease, drought, erratic rainfall, low input usage, inadequate extension services and continuous use the same land for yearly production.

Who are the farmers who participate in the PFJ programme?

Farmer participating in the PFJ programme are mainly male and female smallholder farmers who have land between 1-5 acres and cultivate any of the following crops maize, rice, sorghum, soybeans. Women in the district thought the PFJ programme does not cater for their preferred crops in the package such as groundnuts, Bambara nut, neri, sesame. Both men and women perceive the programme to be helpful to them as they can access.

How are the farmers participating in the PFJ programme?

Farmers are participating at the district technical committee (DTC) level by a representation of the farmer-based organisation chairperson. The representative conveys information between the District Technical Committee and the smallholder farmers in the district. The FBOs network is self-funded and lacks the financial capacity to convey regular meeting for its members in the district. This has affected the information flow between the farmers on the one hand and the district management team.

Some farmers also take the initiative to get registered by the DoA to participate in the programme. However, some complained of the long this distance of travel to the DoA office for the registration. Registered farmers are receiving the coupon to access the subsidy inputs.

Another form of participation is through the farmer organisation groups in the various communities. Input is accessed as a group of farmers in the form of collective input purchase from the DoA with the facilitation of the Extension officers for the community.

Aside these, some noted they participate through the nucleus farmer system (contract farming) the nucleus farmer provides services such as ploughing, inputs and market for its farmer. Farmers pay for the service in kind after the harvest of produce.

Extension service is another pillar of the programme. It provides farmers with innovative farming practices through demonstrations, farmer meetings and farmer field days. The farmers complained of

the services not meeting their production information needs. Agricultural extension service delivery has been low. Much of the problem has been attributed to inadequate professional AEAs, inadequate logistics at the start of the PFJ in the district. Additional staff have been recruited under the PFJ programme and staff assigned operational areas. The capacity of the recruit to carry out activities on the PFJ is questioned since they lack the

What are the reasons for their way of participation in the PFJ programme?

Some farmers were not aware of the full package of the programme, therefore, could not fully participate in all the pillar. Lack of information/awareness of all the five pillars of the programme affected the farmers' full participation in the functioning pillars in the district. Farmers had little knowledge of the seeds available and extension being part of the PFJ pillars.

The women and youth maintained the PFJ has no package specifically targeting them; this has affected their participation. The female priority crops were not covered by the programme due to their restriction on the crops. For project sustainability, specific consideration must be given to gender inclusiveness at the project design stage.

There is a need for the PFJ programme and major stakeholders to come out with special packages for the youth and women.

Since most of their concerns were no access to land, lack of capital and social discrimination, government and NGOs could come in to appeal to the chiefs and family heads to make land available for the youth and the women. Sensitisation on the importance of gender inclusiveness and empowerment should be rolled out.

Out of the five PFJ pillars, three are functioning, namely; the fertiliser subsidy, the subsidised and improved seed and the extension service in the district. However, smallholder farmers perceive low yield and limited access to financial capital as the two main issues that PFJ needs to address. These PFJ pillars are functioning in the district

6.2 Recommendations

Based on the conclusion from the research the researcher makes the following recommendation to the commissioner, Department of Agriculture, Chereponi.

To address the low extension service delivery in the district DoA needs to intensify agricultural extension service delivery to farmers on regular bases on best agricultural practices such as fertiliser application, farm management, pest and disease management

To encourage participation by many smallholder farmers in the district DoA needs to carry out sensitisation about the package of the PFJ to farmers by including the local authority, the religious institutions, youth and women groups in the various communities by spelling out details of the programme. Farmers need to be aware of them to know what they are entitled to in each of the pillars. DoA needs to adopt multiple forms of sensitisation about PFJ on community radios, churches/mosques in local languages, etc.,

As part of the PFJ programme, DoA needs to facilitate access to credit facilities for smallholder farmers, especially women. Sensitisation on the importance of gender inclusiveness and empowerment be rolled out.

DoA needs to collaborate with the local government institutions to establish agricultural mechanisation centre to facilitate farmers, primarily women and youth access to mechanisation service. Mechanisation

services need to be included in the PFJ pillars, and women and youth should be given priority. Farmers especially women and youth need to be supported to acquire simple machinery (power tillers, rippers etc) to facilitate the production process. PFJ will achieve the intended objectives if inputs are adequately

Recommendations for research

- The role of Nucleus farmer in promoting private sector-lead output market for smallholder farmers in the district.
- The role of Farmer- based organisation in promoting farmer participation in productive-enhancing development interventions.

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Focus Group Discussion Guide for Research Data Collection in Chereponi District

Date: _____

Participants _____

Duration: 3 hours

Venue: _____

Facilitated by _____

I am Gabriel Ahlidza a master's in management of Development Studies student at Van Hall Larenstein University in the Netherlands. I am conducting a research on the PERCEPTION OF SMALLHOLDERS FARMERS ON THE PFJ PROGRAMME in Chereponi District as part of my study requirement. I would like to facilitate a discussion with you on; What you as a male or female smallholder farmers group perceive to be the problem the PFF programme needs to address?

I therefore kindly request your permission to proceed. You are free to quite the interview any time you wish.

Question Guides

1. How has your yield situation been? Are the yields improving?
2. What accounts for the yield differences?
3. Problem identification of Smallholder farmers problem
4. What is that the programme wants to address
5. Needs of farmer in term problems
6. Tool Problem tree and seasonal calendar
7. Use the calendar to plan alongside the input delivery time
8. Targeting gender
9. Crop varieties', grow, farmers choices--- Government
10. Were all the crops covered
11. What is the reason for all the choices?
12. Gender Paarticipation

Thank You Very Much!

Key Informant Interview Guide for Research Data Collection in Chereponi District (Agro-Input dealer)

Date: _____

Position of Respondents _____



I am Gabriel Ahlidza a master's in management of Development Studies student at Van Hall Larenstein University in the Netherlands. I am conducting a research on the PERCEPTION OF SMALLHOLDERS FARMERS ON THE PFJ PROGRAMME in Chereponi District as part of my study requirement. I would like to have interaction with you as an **Input Dealer or FBO network Chairperson in the district, you perceive the programme to be going.**

I therefore kindly request your permission to proceed. You are free to quite the interview any time you wish.

Question Guides

1. Shop location, type of inputs, number of outlets in the district
2. How are Smallholder farmers patronizing the PFJ inputs?
3. What are the procedures in accessing the inputs?
4. What is the arrangement between you and government in terms of payments of the subsidy input?
5. What are the Challenges faced by farmers in accessing of inputs?
6. What trainings have you received from DoA on the PFJ?
7. How do you see the continuity of the PFJ programme?
8. Can you share with me your opinion on the PFJ programme in the district?

Thank You Very Much!

Key Informant Interview Guide for Research Data Collection in Chereponi District

Date: _____

Position of Respondents _____



**van hall
larenstein**
university of applied sciences

I am Gabriel Ahlidza a master's in management of Development Studies student at Van Hall Larenstein University in the Netherlands. I am conducting a research on the PERCEPTION OF SMALLHOLDERS FARMERS ON THE PFJ PROGRAMME in Chereponi District as part of my study requirement. I would like to have interaction with you as the **FBO network Chairperson in the district, your level of involvement in the PFJ Programme in the district.**

I therefore kindly request your permission to proceed. You are free to quite the interview any time you wish.

Question Guides

1. Are you A member of the District Technical Committee?
2. What is your role as a member of the DTC?
3. What are the issues discussed during DTC meetings?
4. How is the smallholder farmer in the community view represented?
5. How is the implementation of the PFJ Programme, are farmers participating?