REASONS FOR FAILURE TO GRADUATE FROM THE FARMER INPUT SUPPORT PROGRAMME BY SMALL SCALE FARMERS: THE CASE OF ILUME, MKUSHI DISTRICT.

BY

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A dissertation submitted to the University of Zambia/ Zimbabwe Open University in Partial Fulfilment of the requirements for the Award of the Master of Business Administration Degree.

THE UNIVERSITY OF ZAMBIA

LUSAKA

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DECLARATION

I, Claremont Laki, declare that this dissertation represents my own work, and that it has not previously been submitted for degree, diploma or other qualifications at this or any other university. Due acknowledgments have been done where other sources of information have been used.

Signature: ……………………………………………………………………………………….

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CERTIFICATE OF APPROVAL

This dissertation of Claremont Laki has been approved as a partial fulfilment of the requirements for the award of the degree of Master of Business Administration by the University of Zambia/ Zimbabwe Open University.

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DEDICATION

To my wife, children, family members, friends and the small scale farmers of Ilume camp in Mkushi for their support. May the Almighty God bless you all!

ABSTRACT

Since 2002, the Government of Zambia has been funding a farmer input support programme (FISP) in order to increase household food security and incomes. The program specifies that beneficiaries will collect subsidised inputs from the program for three (3) farming seasons only and graduate thereafter but however, no beneficiary has ever graduated to date. The purpose of this study was to establish the reasons for failure to graduate from the FISP by small scale famers of Ilume agriculture camp of Mkushi district. The specific objectives of this study are to establish the farmer's awareness of FISP graduation pathways; to establish the farm management practices among beneficiaries that would lead to self-sufficiency and surplus production and finally to investigate the sufficiency of inputs received by each FISP beneficiary. A qualitative approach was used and a purposive sampling procedure was used to select three (3) Ministry of Agriculture camp officers, while a snow bow technique was used to identify 40 small scale farmers who have benefited from the input programme for four years and above since there is was no sampling frame. Interview guides were used for MoA officials while three (3) Focus Group Discussions (FGDs) were held with farmers. Semi- structured questionnaires were also administered to individual farmers. Thematic content analysis was used to analyse the data, while Microsoft excel was also used to come up with tables and charts for data presentation. The results of the study show that FISP beneficiaries were not aware of any graduation pathways and conventional farming methods were the most popular among which was in contradiction to the highly recommended conservation farming methods. The results also showed that each FISP beneficiary receive one pack consisting of 2 x 50kgs of basal fertilizer, 2 x 50kgs of urea fertilizer and 1 x 10kgs of hybrid maize seed which are not sufficient. The study concluded that the possible reasons FISP beneficiaries do not graduate are that they are not aware of any graduation pathways; the lack of use of best farming methods have led to perpetual low yields and the insufficient quantities of inputs each farmer receive was only enough for food security, but not enough to lead farmers to increased incomes and poverty reduction. This led the FISP not to achieve the objective of household food security, improved incomes and poverty reduction in full. The study recommended that beneficiaries should be made aware of graduation pathways while the use of conservation farming techniques should not only be recommended, but should be made mandatory to all benefiting farmers. The study also recommended that the government should consider increasing the inputs for each farmer to 2 times the current quantities. This will make farmers achieve the FISP objectives thereby leading to graduation.

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LIST OF ACRONYMS

CA	Conservation Agriculture
CSO	Central Statistics Office
CSPR	Civil Society for Poverty Reduction
DAC	District Agricultural Committee
DFID	Department for International Development
ECA	Economic Commission for Africa
FISP	Farmer Input Support Programme
FNDP	Fifth National Development Plan
FRA	Food Reserve Agency
FSP	Fertilizer Support Programme
GDP	Gross Domestic Product
IAPRI	Indaba Agricultural Policy Research Institute
KII	Key Informant Interview
MACO	Ministry of Agriculture and Cooperatives
MoA	Ministry of Agriculture
MMD	Movement for Multiparty Democracy
MOP	Muriate of Potash
NAP	National Agriculture Policy
PMRC	Policy Monitoring and Research Centre
QDA	Qualitative Data Analysis
SSF	Small Scale Farmers
USAID	United States Agency for International Development
WB	World Bank
ZDA	Zambia Development Agency
ZLZD	Zambia Livelihood Zones and Descriptions

CHAPTER ONE

INTRODUCTION

1.1 Background

The population of Zambia in 2010 was estimated to be 13,046,508 of which 6,394,455 were males and 6,652,053 were females (CSO, 2010). In 2016, Zambia's population was 15.9 million of which 57.9 percent was rural-based. While the larger percentage of the population lives in rural areas, the country has had huge development deficits in rural areas, especially in key sectors that can help facilitate growth and development. Rural areas continue to have poor road networks and poor delivery of social services, limited access to electricity with the majority of the population working in the informal agriculture sector, characterised by low productivity. The living conditions monitoring survey of 2016 as quoted by CSO (2016) shows rural poverty stands at 76.6 percent of the 54.4 percent of the national statistic. The 2016 statistic shows an increment of 5.7 percent increase in poverty for rural poverty.

Zambia, like most developing countries in Africa, has its population concentrated in rural areas. According to Hambulo (2009), 90 percent of the people are dependent on agriculture as their main source of livelihood. The Economic Commission for Africa (ECA) (2009), identified agriculture as the lead sector for economic growth. Todaro (2003), argues that agricultural development is the easiest way of pulling the rural populations out of poverty because the improvements are focused on those directly affected by poverty, the rural poor. Despite the positive effects of agriculture on the rural populations, in Zambia, the Poverty Reduction Strategy Paper (2000), explains that the agricultural population is highly characterised by extreme poverty levels.

The dwindling rural incomes and poverty rates called for interventions to arrest the destitution among the rural poor. The Zambian Government and donors responded to the decline in living conditions with a variety of interventions of subsidizing maize production in form of fertilizer and seed subsidy inputs coupled with intermittent interventions in maize markets through the Food Reserve Agency (FRA). This saw the birth of the Fertilizer Support Programme (FSP) in the year 2000, which has been getting the largest proportion of the budget in the agricultural sector. The government of the Republic of Zambia is currently spending money to improve livelihoods of small-scale farmers through a number of programs put in place such as the Farmer Input Support Program (FISP). Agriculture plays an important role in the lives of many

Zambians through the provision of employment to approximately 70 percent of the labour force in Zambia. It is estimated that approximately 1.6 million small-scale farms and about 1,000 large-scale farms characterize the sector the agricultural sector (PMRC, 2015).

World Bank (2010) reports that the programme has a positive impact on maize production. For example, the study suggested that the 2007/08 FSP resulted in somewhere between 82,000 and 146,000 MT of new (incremental) maize being produced that would not have otherwise been grown without the program. FISP was first introduced in 2001 as the Fertilizer Support Programme (FSP), but was later revised and renamed in 2009 to Farmer Input Support Programme (FISP). In 2015 Government allocated 1.1 Billion Kwacha to FISP, which amounted to 55% of the Agriculture budget. The FISP is designed to wean-off farmers because it is anticipated that in three farming seasons, a beneficiary should have attained food security, increased household incomes, and reduced poverty thereby becoming self-sufficient (PMRC, 2015).

However, the Indaba Agricultural Policy Research Institute (IAPRI, 2015) observed that despite Government spending a lot of money on the Farmer Input Support Programme (FISP), there is was no evidence of farmers graduating, since 2002 when the programme started. It is therefore important that the reasons for failure to graduate from the programme are identified and explained.

1.2 Statement of the Problem

The government of the Republic of Zambia is currently spending money to improve livelihoods of small-scale farmers through a number of programs put in place such as the Farmer Input Support Program (FISP). Among the key objectives of FSIP are to improve food security, raise incomes and graduate after three (3) years. However, it has been observed that despite the FISP running from the year 2002, there is no evidence of farmers having graduated from the Programme (CSPR, 2010: World Bank 2010: IAPRI, 2015).

1.3 Objectives of the study

1.3.1 General objective

The general objective was to investigate the reasons for failure of recipient small scale farmers to graduate from the FISP at Ilume camp, Mkushi district.

1.3.2 Specific objectives

(a) To determine the farmer's awareness of FISP graduation pathways.
(b) To assess the farm management practices among beneficiaries that would lead to self-sufficiency and surplus production.
(c) To determine the sufficiency of inputs received by each FISP beneficiary.

1.4 Research Questions

(a) How aware are the FISP beneficiaries of graduation pathways?
(b) What are the farm management practices among beneficiaries that would lead to self-sufficiency and surplus production?
(c) How sufficient are the quantities of inputs received by each FISP beneficiary?

1.5 The purpose of the study

The purpose of this study was to identify the reasons that make small scale farmers fail to graduate from FISP in Ilume camp of Mkushi District, Zambia.

1.6 Significance of the study

This study may generate information that will contribute to the existing body of knowledge and specific data on the reasons for failure to graduate from FISP by small scale farmers of Mkushi district.

The results of the study may help encourage small scale farmers to adopt best farming methods that may lead to higher yields. This in turn may help in achieving food security, improved incomes and poverty eradication as envisaged by the FISP general objective. Results of the study may also benefit the ministry of agriculture by providing possible reasons why benefiting small scale farmers do not graduate from the FISP.

1.7 Delimitation of the study

The study was carried out at Ilume agricultural camp of Mkushi district in central province of Zambia and the catchment area of its support.

1.7.1 Theoretical Framework

This study was guided by Carol Weiss's Theory of Change. Theory of Change is the process of describing all the building blocks required to bring about a long-term goal. It describes the process of social change by making explicit the perception of the current situation; its underlying causes, the long term change desired and the things that need adjustment for the change to happen. Clear expression of the theory of change in agricultural initiatives is important because it reveals the thinking that guides the intervention and action as well as the trajectory of change within the system (Adekunle and Fatunbi, 2014).

A widely recognized paradigm to have influenced the rural development and poverty reduction thinking is the Theory of Change in agriculture based on small farm efficiency (Niragira, 2011). The theory recognises that lack of education for rural producers, technology and innovation leads to instability in productivity and failure to achieve self-sustenance in small scale farmers. The theory hold that the traditional way of agriculture regardless of the inputs does not increase productivity. Productivity can only increase in the face of the application of new skills and technology. The theory holds that new skills are needed in order to turn small scale farms into highly efficient and productive farms that leads to self-sustenance. Aagaaard (2007) confirms that if small scale farmers can use best practices in their farming activities, they can tremendously improve their yields.

The World Bank emphasizes that agriculture continues to be a fundamental instrument for sustainable development and poverty reduction in the 21st century. Improving the productivity, profitability, and sustainability of smallholder farming is put forward as the main pathway out of poverty in using agriculture for development (WB, 2008).

1.8 Operational definitions

Graduate- Being removed from the program because a beneficiary has achieved self-sustenance.

Income- Money that FISP benefiting households receive in exchange for service they render through agricultural production.

Small Scale Farmer- Grows crops and keeps livestock on a small piece of land without using expensive technologies.

Support services- the services rendered by agriculture extension officers to farmers.

Sufficient inputs- The quantities of inputs that would help farmers achieve household food security, improve incomes and reduce poverty.

Farmer Input Support Programme: is a Zambian government agricultural input subsidy programme that was designed to promote household food security and incomes through agricultural production.

Household: Family members who live together.

Promoting: To contribute towards attaining household food security through crop production.

Food Security: When all households, at all times, have physical, social and economic access to sufficient safe food that meets their needs. In this definition of food security, the aspect of nutritional content (quality) is ignored because, if a household has a field of maize (a starchy food) that forms the main component of the diet, and can sustain the household from one season to the next, the household considers itself to be food secure. Yet, from a nutritional point of view, the household could be food insecure because such a diet would be deficient in proteins, oils and vitamins and other nutrients. It is this very basic definition that this study adopts. Therefore, a household is food secure in a given year if it has enough food to provide its members all the usual meals in a day (breakfast, lunch and supper) for the entire year, otherwise, the household is food insecure.

1.9 Ethical considerations

Ethical issues such as informed consent, confidentiality and consequences for the interviewee should be taken into account with any qualitative interview (Kvale, 1996). In this study, ethical issues were considered when carrying out this study as all the research participants were informed about the purpose of the investigation and the features of research design. Informed consent was obtained from the Provincial Agricultural Coordinator (PACO). All of the participants in this study were treated in accordance to the ethical guidelines of the University of Zambia Ethics Committee. Although there were no identifiable risks for participating in this study, a couple of considerations were kept in mind when dealing with small scale farmers. Throughout the study, the following codes of conduct were adhered to:

1) The respondents' names were not written on the semi- structured interview guides and the information collected was treated with strict confidentiality and academic purposes only.
2) Participants were treated with respect and consent was be obtained from participants before they participated in the study, they were given the right to understand what the researcher was doing.
3) The ethical clearance (code: 2018/June/ 034) was obtained from the University of Zambia Ethics Committee.

1.10 Organisation of the dissertation

This report is divided into six chapters. Chapter one is an introduction to the study and provides the background to the study, research objectives, significance and the purpose of the study. Chapter two (2) reveals the relevant literature to this study. It begins by giving the role of agriculture in food security and poverty reduction. It also gives the background to the farmer input support programme. Chapter three contains the methodology, limitation and ethical consideration of the study. The fourth chapter is a presentation of research findings while chapter five is a discussion of research findings. Chapter six presents the conclusion of the study and recommendations aimed at addressing the reason for not graduating from the farmer input support programme in Mkushi district.

1.11 Summary

The chapter has presented the statement of the problem together with the research objectives and questions, rationale of the study, conceptual and operational definition of the concepts and organisation of the dissertation. The Schultz theory of agricultural development was used in the study which attempts to explain why small scale farmers fail to be self-sustaining even when provided with support. The chapter also explained the ethical considerations that were used in the course of the study and also mentioned that the ethical clearance was sought from the University of Zambia Ethical Committee.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter is divided into four major parts, the first part looks at agricultural livelihood strategies in terms of the role of agriculture in poverty eradication improving livelihoods with particular focus on maize production, as a livelihood strategy of government interventions such as Farmer Input Support Programme in agriculture. The second part of the chapter looks at the review of literature on the global level, while the third part looks at the experiences on the regional level. The fourth part looks at the Zambian experiences.

2.2 Role of Agriculture in rural poverty reduction and food security

The agrarian theory for agricultural development holds that agriculture is an important vehicle for food security, raising incomes and poverty reduction for small scale famers. People in the rural areas of Zambia are involved in some form of agriculture either as a business or sustenance to support their livelihoods. Therefore agricultural activities provide the people with both food and empower them with means of accessing other needs. FNDP (2006) suggests that agriculture in Zambia has great potential for enhancing economic growth and reducing poverty. A well performing agricultural sector translates into significant improvements in the country's GDP, contributes to employment generation, and broadens the country's tax base. To the extent that the livelihood of the majority of Zambians depends on agriculture-related activities, the sector, when well developed, should contribute significantly to welfare improvement.

Agriculture in Zambia supports the livelihoods of over 70 percent of the population. However the contribution of the agricultural sector to GDP has declined from 16 percent in 2001 to 12.6 percent in 2009 (Chikopela, 2014). Zambia has an abundance of potentially agriculture productive natural resources. Arable land is estimated at 42 million hectares out of which only 14 percent is cultivated. With this importance, however, the Zambian agriculture sector continues to be predominantly rain fed only utilizing 6 percent of the 9 percent of the irrigated potential and the rainfall continues to be the major determinant of the year to year production level (African Development Report, 1998).

The overall objective for the agricultural sector, as set out in the National Agricultural Policy (NAP), is "to facilitate and support the development of a sustainable and competitive agricultural sector in order to ensure food security and income generation at household and national levels and maximize the sector's contribution to gross domestic product" (GRZ, 2003,Pg9). It is for this reason that government attaches greater importance to agriculture because it is the vehicle that can deliver food security and poverty reduction.

2.3 Crop Production in Zambia

The Zambian agricultural sector is estimated to have approximately 1.6 million small-scale farms and about 1,000 large-scale farms. Small-scale farming systems in Zambia are overwhelmingly dominated by a single crop, maize.

At national level, 83.4 percent of agricultural households were engaged in Maize production and the total quantity of maize produced in 2013/2014 agriculture season was estimated at 3.8 million metric tons (MT).Of those engaged in maize production, 46.4 percent grew Local maize and 44.5 grew hybrid maize. Results from the Living Conditions Survey show that in the 2013/2014 agriculture season, the number of agricultural households was 1,769,020 and that 89.4 percent of households in rural areas were engaged in agriculture activities while 17.9 percent of households in urban areas were engaged in agriculture activities (CSO, 2016).

In Zambia, maize is grown in most areas except in some exceptionally wet, dry and infertile places where sorghum, millets or cassava are better adapted. Maize is used for human consumption and is also used as livestock feed and for manufacture of industrial products. However, maize productivity is hampered by low soil fertility, frequent droughts and limited use of high yielding varieties and lack of or under application of inorganic fertilizers. Other constraints include under-developed markets and weak extension services and technology delivery systems. As a result, most small-scale famers get very low yields of less than 2.0 t/ha (Chikopela, 2014).

One of the most notable features of Zambia's maize sector is the very wide range of yields attained by farmers across the country and within individual villages. Since the introduction of high yielding varieties in the late 1950s, maize has effectively been fragmented into two different crops, one which is grown at low cost and low yield for subsistence and one that is grown at high cost for sale. Traditional varieties generally yield less than one metric ton per hectare. In non-drought years, Zambia's climatic conditions are ideally suited to maize and individual yields of nine to ten metric tons per hectare are sometimes achieved by the best commercial farmers. On village lands, yields frequently drop to less than one ton per hectare even with the use of fertilizer and hybrid varieties (Saasa, 2003).

Other crops with significant investment potential in Zambia include cow peas, groundnuts, cassava, rice, sorghum, soya beans, sunflower, wheat, and dry beans. Production of these crops is spread throughout the country although most of the crops are grown for subsistence purposes. Therefore exports of these crops are demand driven. The major markets for these products include; South Africa, the Democratic Republic of Congo, Tanzania, Zimbabwe, Gambia and Botswana. The market potential for these crops are huge because very few farmers are engaged in the production but there is significant demand for the crops both locally and internationally (ZDA, 2011).

2.4 Background to the Farmer Input Support Programme in Zambia

When Zambia changed from a one party state to a multiparty democracy in 1991. The country under went restructuring of the economy as conditions given by the Brentwood Institutions for accessing loan facilities. The Movement for Multi-party Democracy (MMD) government had to liberalise the economy and the agricultural sector was affected. This led to declining agricultural production and impoverishment of the rural populations thereby forcing the government to rethink on total liberalization of the agricultural sector in 2002. The change of strategy saw the re-introduction of the agricultural input subsidy through Fertilizer Support Programme (FSP) (Makunka, 2011).

The introduction of the FSP brought government in direct procurement and distribution of agricultural inputs at a subsided rate in the view of boosting agricultural production and the eventual increase in national and household food security. Through the introduction of the Fertilizer Support Programme (FSP) in 2002, Zambia recorded an increase in production leading to exports of surplus produce. This is in direct contrast with the period of the withdrawal of maize marketing and input subsidies, beginning in the early 1990s when maize production in Zambia declined over the ensuing decade and a half, though amid variations induced by the weather (Ibid).

The weather is an important factor in agriculture, however despite weather variations over the period in consideration, there has been a transformation on terms of increasing maize production in Zambia that has been attributed to the increased access and availability of agricultural inputs. Data shows that maize production in 2001/2002 when there was no subsidy, for both the small scale and medium scale was 427,240 tonnes (shared as 362,566 tones small scale and 64,674 tonnes for the medium scale). Then in 2002/2003, when Government introduced the input subsidy the maize production went up for both small scale and medium scale farmers to 823,209 (shared as 664,665 small scale and 158,544 for medium scale farmers). The data shows that maize production increased by a staggering 48 percent the year prior to subsidy and the year of subsidy. As the subsidy continued, increase in production was also recorded in 2003/2004 that surpassed the year one of subsidy with 993,930 tonnes of maize produced. In 2004/2005, the maize production trended downwards to 598,411 tonnes, though not below the year 2001/2002 when there was no subsidy. In the year 2004, Zambia experienced a drought which could have negatively affected the production. The subsidy has continued to date, 2018, and years thereafter, 2004 have continued to record increased maize production for small scale farmers and medium scale farmers. The records show the production as follows 1,106,751 tonnes, 1,103,679 tonnes, 988,169 tonnes for 2005/2006, 2006/2007, 2007/2008 respectively. Maize increased tremendously from the 2007/08 season to last crop season of 2016/17 reported. The records show that 2008/09, 2009/10, 2010/11, 2011/12, 2013/14, 2015/16 and 2016/17 forecasts were as follows: 1,392,180; 1,657,117; 2,463,523; 2,786,896; 2,731,843; 2,532,800; 2,873,052; 3,606,549 tonnes respectively. Table 2.1 shows a summary of maize production from 2001 to 2016 (CSO, 2008: MACO, 2016).

Table 2.1 Maze Production Trends

Agricultural year	**Metric tonnes**	**Agricultural year**	**Metric tonnes**
2001/02	427,240	2008/09	1,657,117
2002/03	823,209	2009/10	2,463,523
2003/04	993,930	2010/11	2,786,896
2004/05	598,411	2011/12	2,731,843
2005/06	1,106,751	2013/14	2,532,800
2006/07	1,419,545	2015/16	2,873,052
2007/08	1,392,180	2016/17	3,606,549

Source: Crop Forecast Surveys, 2000/2001-2007/2008, MACO & CSO

The implementation of FSP meant a lot of policy changes by the government. The ministry of agriculture and cooperatives then started to centrally oversee the input procurement and distribution of the seed and fertilizer to the small scale farmers. The Ministry of Agriculture and Cooperatives at Head Quarters in Lusaka have to procure inputs for all the beneficiaries under the Government subsidy programme nationwide through the process of tendering/obtaining sealed bids from registered Agro Suppliers. The successful bidders are then given contracts to supply and transport the seed to various districts for subsequent distribution to farmers through the Cooperatives. The major suppliers to the FISP Programme are Zamseed, Maize Research Institute (MRI), Pannar, and Seedco, Nitrogen Chemicals of Zambia and Nyiombo Investments (Simfukwe, 2006).

The FSP initially started with a small number of beneficiaries but has been expanding over the years. Mbozi (2009) highlighted that FISP in its first seven years of implementation while using direct procurement, the programme managed to distribute a total of 418,000 Mt of fertilizer (valued at ZMK1, 361.1 billion), covering a total of 1,505,000 hectares of small scale maize. Annually, the programme supplied an average of 60,000 metric tonnes of fertilizer covering about 150,000 small scale farmers, (each with a 1 hectare input pack for maize) countrywide (MoA, 2016).

Having been first introduced in 2002 as the Fertilizer Support Programme (FSP) it was later revised and renamed in 2009, to Farmer Input Support Programme (FISP). Under FISP the input pack size given to farmers was reduced from eight (8) 50 kilogram (50kg) bags of fertilizer and 20 kilograms (20kg) bags of maize seed to four (4) 50 kilogram bags (50kg) of fertilizer and 10 kilogram (10kg) bags of maize seed. This was done in order to increase the efficiency of input use by farmers and increase the number of beneficiaries. The increase in the number of beneficiaries forced government to increase the portion of the FISP in the agriculture budget. In 2015 Government allocated 1.3 Million Kwacha to FISP, which amounted to 55% of the Agriculture budget (MoA, 2016). The FISP allocations from 2002/2003 to 2015/2016 farming seasons is shown in table 2.

Table 2.2: FISP budgetary allocation from 2002/2003 to 2015/2016

Season	Budget (Million)	Fertilizer (MT)	Targeted beneficiaries	Subsidy level (%)
2002/03	100,000	48,000	120,000	50
2003/04	114,500	60,000	150,000	50
2004/05	112,600	46,000	115,000	50
2005/06	140,000	50,000	125,000	50
2006/07	198,000	84,000	210,000	60
2007/08	150,000	50,000	125,000	60
2008/09	185,000	80,000	200,000	75% for fertilizer, 50% for seed
2009/10	435,000	100,000	500,000	75% for fertilizer, 50% for seed
2010/11	430,000	178,000	891,000	76% for fertilizer, 50% for seed
2011/12	485,000	182,454	914,670	76% for fertilizer, 50% for seed
2012/13	500,000	183,634	877,000	
2013/14	500,000	188,311.60	900,000	50% for fertilizer, Free seed
2014/15	500,000	208,235.75	1,000,000	
2015/16	1,338,082	208,235.75	1,162,572	

Source: MoA (2016).

2.5 FISP Implementation Process

The Zambia daily mail (2017) explains that between 2003 and 2004, the Zambian Government through its agricultural policy established the National Fertilizer Support Program (NFSP) to improve food security amongst the poor small scale farmers in all the provinces of the country. The program was supposed to run for a specified period of time where Government started subsidizing the fertilizer and maize seed at 75%. Government’s subside was further supposed to be reduced to 50% and 25% until a stage where the farmers were supposed to pay for the total cost of the fertilizer pack. This basically meant that after a period of three years, the farmers were supposed to be waned and start buying their own fertilizers from the input suppliers.

One of the key feature of FISP is that agricultural extension will play a key role for improved production and productivity. The senior agricultural officer (SAO), camp extension officers (CEOs) and the block extension officers (BEOs) were mandated to ensure effective provision of extension support to benefiting farmers. The MOA staff were also mandated to create awareness on the operations of the program to the benefitting farmers (MOA, 2016). Extension messages in Zambia have been based on one nationally recommended application rate of 200 kilograms of basal fertilizer (Compound D, 10-20-10 NPK) and 200 kilograms of top dressing fertilizer (Urea, 46-0-0) per hectare of maize. This one-size fits- all recommendation ignores the major differences in small farm conditions and differing market conditions. Efforts to raise the profitability and effective demand for fertilizer will depend on helping farmers to use the input efficiently, which in turn depends on management practices, use of fertilizer-responsive seeds, and taking into consideration how agro-ecological and market conditions affect appropriate application rates (Xu et al, 2009).

According to Ministry of Agriculture (MOA) (2016), the objectives of FISP are as follows:
The overall objective of the FISP programme is to improve the supply and delivery of agricultural inputs to small scale farmers through sustainable private sector participation at affordable cost, in order to increase household food security and incomes. The specific objectives are to:

i. Expand markets for private sector input suppliers/ dealers and increase their involvement in the distribution of agricultural inputs in rural areas, thereby reducing direct involvement of Government;
ii. Ensure timely, effective and adequate supply of agricultural inputs to targeted small scale farmers and improving access of the farmers to agricultural inputs are other objectives of FISP;
iii. Ensure competitiveness and transparency in the supply and distribution of inputs;
iv. Improve access of small scale farmers to agricultural inputs;
v. Serve as a risk sharing mechanism for small-scale farmers to cover part of the costs for improving agricultural productivity;
vi. Facilitate the process of farmers' organisation, dissemination of knowledge and creation of rural institutions that will contribute to the development of the agricultural sector.

The FISP beneficiaries are strongly encouraged to practice best farming methods such as conservation farming and the use of herbicides (CSPR, 2010). Conservation farming involves the retention of crop residues as opposed to the widespread practice of burning. The use of herbicides, early planting and the use of hybrid seed are pillars of conservation farming (Aagaard, 2007). Enforcement of the agriculture best practice methods should be enhanced. The FISP implementation manual highlights that those to benefit from the FISP should practice best farming methods and we strongly recommend that this clause should be enforced in view of climate change (CSPR, 2010).

2.6 Other experiences

On the global level, Hareth et al (2013) conducted a study on the impact of *"Kethata Aruna"* fertilizer subsidy programme on fertilizer use and paddy production in Sri Lanka. The study made analysis on the following factors affecting paddy production; the impact of fertilizer subsidy on use of fertilizers and the impact of price on the use of recommended quantities of fertilizers.

The study showed that there was a clear reduction in the paddy sector fertilizer use when the subsidy was removed. Hareth et al argues that this phenomenon acts as an evidence for the fact that the fertilizer consumption by the paddy sector depends on the price of fertilizers. The study further shows the reaction of the fertilizer use in 1997 when the fertilizer subsidy was restricted to Urea. The fertilizer use respond was very clear in this situation where a jump in Urea use was observed while MOP consumption figures remained more or less unchanged. This was as a result of the introduction of the fertilizer subsidy on urea while removing the subsidy on MOP.

The study suggests that the fertilizer application in the paddy sector of Sri Lanka is dependent on the fertilizer price. This means that subsidized fertilizer prices promote the farmers to use recommended rates of fertilizer for their paddy crops. The results indicate that 88% of the variation of the national paddy production is explained by the combined effect of total fertilizer, sown extent and the technological improvement (at 5% probability level). Based on the results of multiple regression analysis, the study concluded that 1% increase in the input of total fertilizer results in a 0.109% increase in the total national paddy production. Similarly, increase in 1% of sown extent results in a 0.85% increase in national paddy production.

This study is important to the current study because it brings out the correlation between fertilizer use and price. The study also suggests an increase in production based on subsidised fertilizer. This study therefore is aimed at identifying the reasons for failure to graduate by small scale farmers under the FSIP.

2.7 African Experiences

On the African experiences, a number of studies have been done on the input support programmes. These studies are not directly focused on the reasons for failure to graduate from FISP by small scale famers, but they definitely bring out issues that are relevant to the focus of this study. Among the studies reviewed for this study include those conducted by Chirwa and Dorward (2013), Adeolu and Ojor (2016) and Bunde et al, (2014).

On the regional level, Chirwa and Dorward (2013) conducted a study on the agricultural input support, the recent Malawi experience. The focus of the study was three fold: to update and develop theoretical understanding of agricultural input subsidies' impacts, allowing for new delivery systems and instruments and specific constraints inhibiting the livelihoods of poor subsistence farmers and the economies of which they are a major part; to derive from Malawi's experience lessons about the implementation and impacts of a large-scale agricultural input subsidy programme, with specific focus on the contextual, design, and implementation determinants of economy-wide, beneficiary, and market impacts; and to promote debate about strategic policy decisions in the design of large-scale agricultural input subsidies in contemporary low income agrarian economies, including targeting and graduation, to foster their sustainable contribution to agricultural development and poverty reduction.

The study shows that input subsidies can make contributions to economic development in poor agrarian economies. In addition to reducing food insecurity, ameliorating soil fertility problems, and increasing land and agricultural labour productivity, they can also drive wider, dynamic processes of pro-poor growth, structural change, economic diversification, and market thickening and development. However, Chirwa and Dorward (2013) concludes that such a contribution is dependent on the principle condition that subsidies should address market failures (in, for example, access to knowledge or to input or capital markets) with significant and normally labour-demanding productivity increases for crops produced by large numbers of smallholders is a must. Such crops will generally be staple crops, with a ‘double benefit’ if staple food markets are relatively isolated from international markets, in which case the provision of inputs may also promote possible market or pecuniary externalities from staple crop cultivation. The study also suggested that programme design and implementation should be integrated with policies promoting wider processes of growth and, where double benefits can be achieved, to net buyer’s interests in programme impacts. Results of the study also highlighted that poor systems may reduce programme effectiveness and efficiency as problems of ‘exclusion’ limit receipt of subsidized inputs by farmers facing market failures and able to make the most productive use of these inputs. The study concluded that political commitment is critically important for major resource investments in large-scale input subsidies. Chirwa and Dorward (2013) just like Hareth et al (2013) suggest that input subsidy programmes increase production which should lead to an increase in incomes too. This study is designed to bring out reasons behind the persistent poverty despite an increase in production.

A year after Chirwa and Dorward conducted their study in Malawi, Bunde et al, (2014) conducted another study in Kenya. The study assessed the Impact of Fertilizer Input Subsidy on Maize Production in the Nandi North District. The study analysed the impact of farm input subsidy program on maize productivity and household food security; farm inputs use and adoption based on land sizes; the efficiency of beneficiary recruitment process; to investigate challenges facing agro-dealers in Nandi North district and; to document farm input subsidy program success story in Nandi North district.

The study found out that the farm input subsidy programme led to increased output of maize in the district. The findings of the study show that the overall perception of farm input subsidy program had good results in the lives of farmers and agro-dealers. These impacts arose from increased household food security through provision of inputs to farmers who would not have used such inputs under normal circumstances and by building the capacity of agro-dealers to supply and distribute farm inputs to farmers. The study also reveals that majority farmers experience high transaction costs in their agriculture business.

The study recommended strengthening farmers’ effective demand for fertilizer by making fertilizer use profitable and by building durable inputs and output markets that can absorb the increased output without gluts that depress producer prices. Increase fertilizer use efficiency

by promoting farmers' use of improved crop management practices such as crop rotation with legumes, changes in density and spacing patterns of seeds and placement of fertilizer and seeds at early planting, timely weeding, and applying fertilizer in response to rainfall and other conservation farming methods. Bunde *et al,* (2014) found out that the criterion used for selecting beneficiary farmers had worked well even though there is need for further enhancement to ensure that the farmers selected are capable by not only being identified through stakeholder' forum but by also individually applying for the support. The study recommended that recruitment of farmers and agro-dealers should start at least two months prior to the onset of the season to allow adequate time to screen the selected beneficiaries.
Although Bunde et al, (2014) had a different area of focus from the current study, the study confirmed the findings of other writers that such programmes lead to food security and an increased crop production.

Adeolu and Ojor (2016) conducted a study on the pro-poorness of fertilizer subsidy and its implications on food security in Nigeria. The study focused on among other areas, reviewing the GES Scheme since its inception in Nigeria and estimated the pro-poor indices for the subsidy programme among the farmers in Nigeria.
The study observed that accessibility to fertilizer in Nigeria can be worst off in the absence of fertilizer subsidy scheme, if the structural, market, credit and capital constraints that hinder accessibility to fertilizer are not eliminated in Nigeria. The pro-poorness analysis suggests that while Voucher Fertilizer Subsidy Scheme seems to be more pro-poor than E-wallet Fertilizer Scheme on the basis of accessibility, none of them was pro-poor when the analysis is done on the basis of quantity of fertilizer purchased.
On the area of pro-poorness, the study shows that the rich and richest farmers are the immediate beneficiaries of fertilizer subsidy scheme that are designed to assist poor small-scale farmers in Nigeria and apart from the income profile, the study shows that education was a distinguishing factor associated with purchasing fertilizer during fertilizer subsidy scheme in Nigeria. The study further shows that in the event of fertilizer subsidy expenditure being increased by 100% (double), the share of the poorest (core poor which is the target of E-wallet fertilizer subsidy), will decline by about 8%(-0.0791), while the share of the rich will increase by 8% (0.0803).

The finding suggests that the poor's initial rate of access to a fertilizer may determine the relative extent to which the poor will be benefit from the expansion of the fertilizer subsidy scheme. Adeolu and Ojor (2016) concluded that any constraints that limit the accessibility of the poor farmers to fertilizer subsidy will also hinder their share of the fertilizer subsidy even the government spend more on fertilizer subsidy scheme in Nigeria.

2.8 Zambian Experiences

The literature review shows that no studies have been done on the causes of persistent poverty among small scale farmers on the farmer input support programme. However, there are scholarly pieces of work on the effects and efficiency of the farmer input support programme in Zambia which have been done by the following: Sianjase (2013), Nalishiwa (2011), Mason and Tembo (2015), World Bank (2010), Mason et al (2013), Kuteya et al (2016) and Magasu (2016).

Sianjase (2013) conducted a quantitative study on the impacts of farmer input support programme on beneficiaries. The study was a case of Gwembe district in southern province of Zambia. The study focused on the three following aspects: the impact of input subsidies on maize output after controlling the size of the household, the sex of the head of the household, the age of the head of the household, the education level of the head of the household; the effect of the input subsidies on households' dependence on subsidies in maize production and finally to draw policy implications on the need to continue or to discontinue with input subsidies from the empirical findings.

The study highlighted that between 2005 and 2010, an average of 95.6 per cent of Ministry of Agriculture and Livestock (MAL) expenditure then was on the FISP inputs subsidy programme while only 4.4 percent of the total expenditure in the same period was for the Ministry's core functions. The study was based on primary data that was collected from the eight (8) randomly selected agricultural camps in Gwembe district. The researcher administered questionnaires that helped to collect data from 2008/2009 to 2011/2012 farming season, targeting only those smallholder farmers who received subsidized seed and fertilizer from FISP.

The study used panel data collected from the smallholder farmers in Gwembe district in the four seasons to estimate how an additional kilogram of subsidized fertilizer and seed affects maize production across the distribution of these smallholder farm households. The results from this study demonstrated that it may in fact be difficult for subsidy programs to achieve the joint goal of reducing poverty and boosting staple crop production. However, Using quantile regression with a correlated random effects estimator to deal with endogeneity, results showed that households at the 5th percentile of the maize production distribution obtain a response of just 0.69Kg of maize per Kg of subsidized seed and fertilizer acquired. In addition the study showed that a Kg of subsidized fertilizer and seed produces no significant return to crop production at the lower end. Since the study used percentiles, the study showed that an additional kilogram of subsidized fertilizer and seed boosts maize production by 2.58Kg at the 50th percentile of the maize production distribution and by 2.11Kg at the 90th percentile of the maize production distribution. The study showed that it is reasonable for Government to target more productive farmers in order to boost maize production (at the 50th percentile). The study also showed that beneficiaries have developed a dependency syndrome although the levels of dependency differed from percentile to percentile.

On the policy implications, the study shows that it is advisable for government to target small scale farmers who have between 1 and 2 hectares of land with enough family labour to be able utilize the subsidized inputs and are located far from private input suppliers and thus have trouble accessing fertilizer and seed on the commercial market. The study by Sianjase (2013) has brought out pertinent issues on the FISP management of the program. The important issues of beneficiary retargeting have been analysed. However, the gap remains as to why farmers have not been graduating from the FISP since inception of the program. The reasons for luck of graduation from FISP is the focus of the current study in order to fill up the gap in the body of knowledge.

Mason and Tembo (2015) also conducted a study that focused on finding out if input subsidy programs raise incomes and reduce poverty among smallholder farm households in Zambia. The study was motivated by the observation that the rural poverty rate in Zambia in 2010 (78%) was unchanged from its 2004 level despite government's devoting nearly 50% of its agricultural sector Poverty Reduction Program spending to agricultural input subsidies during the intervening years. The results suggest that while FISP fertilizer raises smallholder incomes (by raising maize production and crop incomes) and reduces the severity of poverty (the squared percentage difference between household income and the poverty line), it has no statistically significant effect on poverty incidence (the probability that household income falls below the poverty line).

Mason and Tembo (2015) further found out that FISP fertilizer would have to have a very large impact on the incomes of many poor farmers to substantively change the poverty rate. While the income effects of FISP fertilizer appear to be sizeable in percentage terms, the increases are modest in absolute terms meaning that an increase of US$46 per adult equivalent per year is less than US$0.13 per adult equivalent per day and is only a fraction of the US$2/day and US$1.25/day poverty lines. Another major explanation for lack of impact on FISP on poverty incidence among smallholders and the small impacts of FISP on poverty severity is that very little FISP fertilizer is allocated to poor households. The study also showed that the programme had targeting problems thereby missing the very vulnerable. The study shows that in 2002/03, only 7% of FISP fertilizer went to the poorest 40% of the smallholder population, whereas the richest 20% garnered 63% of FISP fertilizer. The situation improved somewhat in 2010/11 but FISP fertilizer still went disproportionately to wealthier households: the poorest 40% of smallholders got 15% of the fertilizer while the richest 20% of smallholders got 42% of it. The study assessed that if FISP aims to reduce poverty by directly targeting poor farmers, it has largely failed.

The study recommended that in order to increase FISP participation among poor smallholders without increasing the subsidy rate, the Zambian government could consider removing the cooperative/farmer group membership requirement (poor smallholders may not be able to afford to join or pay annual dues and capping the maximum area cultivated for beneficiary households at 2 ha instead of 5 ha (currently 78% of poor households cultivate less than 2 ha but households cultivating more than 2 ha capture most (55%) of the FISP fertilizer. Government was also implored to consider recapitalizing the Food Security Pack Program, a program that targets free seed and fertilizer to the poorest of the poor but that has been starved for funds since the mid-2000s.

In order to boost the per-kg effects of FISP on household maize production and incomes, the study recommended that government should seek to improve the timeliness of delivery of FISP fertilizer and provide extension support to farmers on best agronomic and soil fertility management practices, both of which could help raise currently paltry maize-yield response rates. Improving the targeting of FISP fertilizer so that it is allocated to households that cannot afford fertilizer at commercial prices could reduce displacement/crowding out.

The study concluded that FISP is not very effective at reducing poverty and that other approaches to poverty reduction that may be more cost-effective than FISP, such as social cashtransfer programs and investments in rural infrastructure, agricultural research and development, health, and education should be considered.

Another study was carried out by Nalishiwa (2011) on the effect of Farmer Input Support Programme (FISP) on small scale farmers in Mwembeshi, Chibombo District of Zambia. The focus of the study was to assess the effect of the FISP on asset development for rural small-scale farmers and to determine whether FISP has managed to reduce cost of production for small-scale farmers thereby overcoming their structural inefficiencies.

The findings indicate that the FISP is a necessary but not sufficient programme for fighting rural poverty in Zambia. This is because it has not significantly improved the farmers' capacity to buy more fertilizer. Instead, they have used what they received from the programme. The study shows that only 16% of beneficiaries bought from the private sector in the farming season the study was undertaken. The study further shows that, FISP has a partial effect on productive assets going by the significant differences between the two categories of farmers that were analysed in the study.

Further, Nalishiwa (2011) found out that food insecurity, poor governance structures, distress selling, lack of personal motivation and property rights to land were compounding factors for the persistent poverty among the correspondents. The study also found out that it hardly takes two months into post-harvest season that some farmers run out of food stocks. While the FISP could have attempted to play its role in poverty reduction through asset accumulation, it may have not succeeded due to its single handedness against the multiple causes of poverty in the area. However, the study showed that to a larger extent, the FISP has had a positive effect on asset accumulation and maize productivity for farmers in Mwembeshi.

The study by Nalishiwa (2011) brought out the benefits of the FSIP on asset accumulation, but does not explain why even in the face of asset accumulation, farmers were still not graduating. This study is designed to bring out the reasons for small scale farmers fail to graduate from FISP.

Magasu (2016) conducted a study on the effectiveness of farmer input support programme in promoting household food security in Chiawa, Kafue district.

The specific objectives were to investigate the quantity of inputs received by each FISP beneficiary; to establish the food security at household level as a result of the fertiliser input support programme and to determine the factors that affect the effectiveness of fertiliser input support. The study employed a combination of quantitative and qualitative approach (but largely qualitative methods) to generate data about the effectiveness of FISP in promoting household food security in Chiawa. The qualitative data were analysed manually while quantitative data were analysed using Microsoft excel to come up with tables, charts and a histogram. The study used a multi stage sampling procedure to select some respondents. The procedure employed both simple random selection and purposive sampling. Data was collected through a semi structured questionnaire and interview guides. A semi structured questionnaire was administered to a sample of 21 FISP beneficiaries who were interviewed on one to one basis. An interview guide was administered in three (3) Focus Group Discussions (FGDs) were some FISP beneficiaries were randomly selected. Six (6) Village headmen and two (2) Ministry of Agriculture (MA) officials were purposively selected and interviewed.

Magasu (2016) revealed that FISP has not resulted into the beneficiaries being household food secure in Chiawa. This was attributed to various factors that adversely affected the effectiveness of the programme. The study established that inputs that were being supplied to farmers under FISP were inadequate. Each beneficiary was given one pack which contained 50kg x2 of basal dressing fertiliser, 50kg x2 of top dressing fertiliser and 10kg maize seed. The study also established that the pack only contained one type of seed and that is maize. Other factors that were established that affected the effectiveness of FISP were the lack of funds by some small scale farmers to pay the required contribution for them to access the inputs, late delivery of inputs by MA to the beneficiaries and sale of inputs by some beneficiaries, inadequacy of seeds and fertiliser, limited seed varieties, sale of inputs by some beneficiaries. The study concluded that FISP had not resulted into household food security among FISP beneficiaries in Chiawa. Based on the research findings, the study made some recommendations on how FISP could be improved in order for it to promote household food security. The study recommended that the government should consider subsidising the FISP pack further to enable majority of the small scale farmers' access it. In view of the recurrent droughts in the area the study also recommended that FISP pack should be improved to include drought tolerant seeds crops such as sorghum and millet. Lastly, the study recommended that a study be conducted to investigate on how FISP pack can be improved to promote household food security. The study by Magasu (2016) brings out the some of the critical information on the effectiveness of FISP on promoting house hold security, the study did not bring out reasons for failure to graduate from FISP which the focus of the current study.

The World Bank (2010) conducted an impact assessment of the FSIP, analysis of effectiveness and efficiency. The study used a unique public sector expenditure tracking and qualitative service delivery approach on Zambia. The study found out that the FSIP is not effective and efficient. The study found out that less than 4% of the FSP fertilizer in 2007/08 was distributed before the end of October and 69% of beneficiaries said they did not get their inputs until after the start of the rains. The study also estimates that incremental maize production that can be attributed to the FSIP is 61-78% lower than predicted by the Ministry of Agriculture.

The World Bank (2010) further found out that the lack of differentiation of the FSP program with regard to agro-ecological and economic characteristics of the targeted areas reduces effectiveness of the program. The study found out that at the farm level, the universal application of a 4x4 input pack for maize under the FSP makes little sense because of variations in climate, market access, resource limitations, and other factors that shape individual decision making in a free market economy. The World Bank further found out weakness in transparency and accountability as evidenced by the difficulty to determine the actual amounts Ministry of Agriculture spent on individual supplier contracts and lack of reconciliation of the amounts collected from farmers and deposited in the central account. During the study for example, at the district level, cooperatives could only confirm having received 80% of the inputs district officials said they sent to them and the reported leakages were high in some districts.

Despite the challenges, the World Bank (2010), however found out that the programme has an incremental effect on maize production. The analysis concludes that the FSIP beneficiaries produced around 82,000 to 146,000 tons that would not have been grown without the program. The World Bank concludes that the program in its present form lacks a monitoring and evaluation system at the central level to help make informed decisions on the program's scope and coverage.

Finally, Kuteya et al (2016) conducted an in-depth analysis of Zambia's agricultural budget by focussing on distributional effects and opportunity cost. The study claims that the Zambian agricultural budget is myopically focused on achieving a national maize security objective, and in the process ignores the conditions under which most rural people live (i.e., small landholdings, low income, limited asset base, poor infrastructure, limited knowledge of improved agricultural practices and credit market failures).

Kuteya suggests that, with the majority of the poor living in rural areas and depending on agricultural related activities for their livelihoods, there should be deliberate policies that target the various groups of smallholder farmers in order to reduce rural poverty, stimulate agricultural growth, and reduce malnutrition. The study further suggests that in order to achieve meaningful pro-poor growth, there is need to restructure the composition of the allocations to the agricultural sector. The budgeting process also needs to take into account the fact that there are different categories of the rural poor whose needs can be serviced differently and by

Subjecting different categories of rural households to the same conditions, disadvantages households that are relatively weaker and poorer. The study therefore found out that this partially explains why government programs such as FISP and FRA end up disproportionately benefiting relatively well off in terms of income, assets and land holdings. Kuteya finally concluded that if the limited government funds could be targeted according to the particular needs of these diverse groups, there is a higher likelihood of positive impact on rural poverty.

Kuteya et al (2016) brought out the information on how the FISP implementation process has overlooked the different statuses of the beneficiaries leading to their condition of living. The study brought out the fact that the Zambian agricultural budget seems to be focused on achieving a national maize security objective, and in the process ignores the conditions under which most rural people live. There is a gap in the study on how a change in the implementation of FISP from the budgetary angle might lead to farmers graduating from the FISP. This current study fills the gap by focussing on the reasons for failure to graduate from FISP by small scale farmers of Ilume in Mkushi district.

Mason et al (2013) conducted another study to review Zambia’s agricultural input subsidy programs by focussing on targeting, Impacts, and the Way Forward. While the study did not directly estimate the effects of FISP fertilizer on poverty, the findings suggested a number of plausible reasons why rural poverty rates remain high despite massive spending on FISP. Mason suggests a redesigning of the whole programme because analysis show that such a move can increase the poverty reduction impacts and can help the programme to better achieve other program objectives. The study also brought out the fact that the majority of FISP fertilizer is not allocated to the poorest households but rather, it is allocated to households that cultivate more land (2ha and above), who are more likely to fall above the poverty line. The analysis of the study suggest that the majority (73%) of Zambian smallholder households cultivate less than 2 ha of land, and 78% of the smallholders below the poverty line fall into this category . and therefore targeting FISP to households that cultivate 0.5 to 2 ha of land has the potential to greatly increase the poverty reduction impact of the program without jeopardizing national food security, since these households use fertilizer just as efficiently as households that cultivate larger areas.

Even though all the studies that have been reviewed are not specific on the focus on the proposed study, they brought out issues that are relevant. For all the studies viewed above, they suggest that input programmes like FSIP increase food security and crop production. The studies however show gap in literature on the reasons why beneficiaries are not graduating despite evidence that the programme has increased maize production. This study therefore fills the gap by focussing on the reasons for failure to graduate from FISP by small scale farmers.

2.9 Summary

This chapter provided literature giving a historical overview of the role of agriculture in rural poverty reduction and food security. The chapter also explored crop production in Zambia before giving the background to the farmer input subsidy programme in Zambia. The chapter also explored the FISP implementation process thereby specifying the requirements of the program to the beneficiaries, the objectives of the FISP and the responsibilities of the ministry of agriculture officials. The chapter reviewed literature on the global, Sub-Saharan Africa as well as the Zambian experiences thereby bringing out the empirical evidence of some studies that have been conducted in Zambia and other developing countries on farmer input subsidy programmes were also. The chapter reviewed eleven (11) studies that have been undertaken on input subsidies. On the global level, a study carried out in Sri Lanka was reviewed while those from Nigeria, Kenya and Malawi have been reviewed as regional empirical evidence. Seven studies that have been undertaken in Zambia have also been reviewed to help identify the gaps in the body of knowledge. The literature has also demonstrated the uniqueness of this study in relation to the reviewed literature.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the method and materials to be used in this study. The following aspects are covered in this chapter, the research methodology, study area, data sources, primary data, population and sample size, research design, sampling method, measurement of concepts, data analysis, interviews, secondary data and limitation of the study.

3.2 Research Design

This study employed an exploratory case study approach and qualitative research study to investigate the reasons for failure to graduate from FISP by small scale farmers. Creswell (2003) affirms that qualitative research study produces more in-depth, comprehensive information and seeks to understand people's interpretations, perceptions and lived experiences. Bryman (2008) asserts that the case study method enables a researcher to closely examine the data within a specific context, and thus gives in-depth information on the subject under investigation.

The qualitative approach enables the study to be analytical or explanatory because it requires explanations on the reasons for failure to graduate from FISP. Bryman (2008) argues that qualitative research can be understood as that research strategy that emphasizes words rather than quantification in the collection and analysis of data. According to Rubin and Babbie (2005) qualitative research emphasizes the need to elicit a deeper understanding of the phenomenon in its natural environment.

3.2 Study area

The proposed study site for the study is Ilume agricultural camp of Mkushi District, Central Province of Zambia. Mkushi district is located 290km north east of Lusaka, the capital city of Zambia. As of the 2010 Zambian National Census, Mkushi District had population of 154,534. The district is administratively divided in four Agriculture blocks and eighteen (18) Agriculture camps under the Ministry of Agriculture and Livestock (CSO, 2010). Mkushi district lies on a high plateau with undulating plains at an altitude of 1000-1300 meters above sea level in agro-ecological Region III, receiving annual rainfall above 1000 mm per annum from November to April. The average high temperatures range from 25-29 degrees Celsius during summer and drop to around 18-20 degrees Celsius in winter. Soils are fertile, sandy and clay, and loamy with very good production potential. The soils support predominantly of Mopane, Miombo, and Munga woodlands with some grassy savannah. The natural resources endowments include forests and vast grasslands that are good for livestock grazing (USAID, 2014).

The main crops grown are maize, groundnuts, and cassava using the ‘chitemene’ (slash and burn) system of cultivation. The long growing season (120-160 days) is suitable for most crops. The region has fertile soils making it possible for farmers to grow maize, groundnuts, cow peas and a range of cash crops including sunflower, irrigated wheat, soybean and horticultural crop (Mwale *et al*, 2007). The region is also a hosts to the famous Mkushi Farming Block where commercial farming is practiced.

3.3 Study population

The study population includes all small scale farmers who are beneficiaries of the Farmer Input Support Programme at Ilume Agricultural Camp in Mkushi District. These farmers should have benefitted from the programme for the past four seasons. The district has 17,000 Small Scale Farmers who are on the Farmer Input and Support Programme. The rationale for choosing this area is that it is a rural setting with the majority of the people being small-scale farmers.

3.4 Study sample

Bryman (2008) asserts that samples for qualitative studies are generally much smaller than those used in quantitative studies because if it is too large, it may be difficult for the researcher to extract thick and rich data. The study therefore used a total sample of 40 Small Scale Farmers who have been beneficiaries of FISP for four years. The study had two target groups (TG), target group one (TG1) comprised small scale farmers who have been on the Farmer Input Support Programme for four years and over, while target group two (TG2) was Agricultural Camp Officers from Ilume agricultural camp. The District Agricultural Coordinator was also solicited for information.

3.5 Sampling techniques

Rubin and Babbie (2005), explain that sampling is a process of selecting observations and most studies are conducted to determine some issues about the characteristics of a particular population, it is seldom possible that all the elements of that population can be investigated as it is not only impractical but it would also be resource consuming. Therefore, a proportion of that particular population is drawn and used in the investigation as a basis for the conclusions and generalizations about the entire population (Bryman, 2008).

The study used purposive sampling techniques to select the camp officer responsible for Ilume from the list of 16 camp officers of Mkushi district. Purposive sampling is a non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling helps to focus on particular characteristics of a population that are of interest which will enable the researcher to answer research questions (Creswell, 2014).

Snowball sampling was also used as a back up to purposive sampling to identify FISP beneficiaries who have been on the programme for over four years because there was no sampling frame for this category of farmers. The Ilume camp officer identified farmers who recognised their colleagues as having been on the FISP four and above. Appointments were made with the identified farmers for interviews. The researcher carried out the interviews and filled in the semi- structured questionnaires. Three Focus Group Discussions were also held with the farmers.

3.6 Data collection methods

Data collection methods used included Focus Group Discussions (FGDs), semi-structured questionnaire, interview guides and document analysis. Semi-structured questionnaires were used to collect data from individual farmers who were later part of FDGs. Interview guides were used to collect data from the camp officers and the district agriculture coordinator. Qualitative research interviews enable researchers to understand something from the subjects' point of view and to uncover the meaning of their experiences (Creswell, 2003). Interviews also allow people to convey to others a situation from their own perspective and in their own words. Berry (1999) also asserts that in-depth interviewing is a type of interview which researchers use to elicit information in order to achieve a holistic understanding of the interviewee's point of view or situation. This method therefore allowed the researcher to ask open-ended questions, probe and ask follow questions in order to solicit for in-depth information from participants. This method also allowed the research participants to freely express their views, feelings, opinions and share experiences. The face-to-face interview also enabled the researcher to take fields notes during the interviews.

The researcher also conducted document review to collect data on the reasons for failure to graduate from the FISP by small scale farmers. Payne and Payne (2004) describe the documentary method as the techniques used to categorize, investigate, interpret and identify the limitations of physical sources, most commonly written documents whether in the private or public domain. In the current research, official and public documents, including reports from the Zambian government, articles, newspapers and organisational documents were used to give the researcher a deeper understanding of the subject under investigation. Document analysis provided access to empirical evidence based on the earlier studies carried on the input support in Zambia and other parts of the world. It also enabled the researcher to formulate and refine research questions based on the existing knowledge on farmer input support.

3.7 Data collection procedure

For primary data, appointments will be made with identified small scale farmers for Focus Group Discussions. Interviews will be carried out with camp agricultural officers from the ministry of agriculture.

Secondary data will be collected from the Ministry of Agriculture and government publications such as Fifth National Development Plan (FNDP), Sixth National Development Plan (SNDP), National Agriculture Policy (NAP) and Poverty Reduction Strategy (PRSP). Some information was obtained from reports, journals and books from the University of Zambia library both published and unpublished articles. Additional information was got from some master's theses. Some information was obtained from census reports from Central Statistics Office. Secondary data was used because much of the background work needed has already been carried out.

3.8 Data analysis procedure

Thematic content analysis was used as a method for analysing qualitative date in order to allow the researcher to extract conceptual categories of data with similar meaning. This is called meaning categorization according to Kvale (1996). The data from the field were manually analysed using thematic analysis. Major themes were drawn from the interviews and coded. Direct quotations from the respondents were also used to present the findings. According to Kombo and Tromp (2006), thematic analysis identifies the major themes or concepts from the discussion and the frequency with which the theme appears is used to interpret its importance, attention or emphasis. The data were categorized into key issues/themes and analysed thematically. This included transcribing notes and interviews. Materials that were examples of similar themes or analytic ideas were put together and analysed according to themes (Creswell, 2003). Microsoft Excel was used to come up with tables and charts that were used to present some of the research findings.

3.9 Summary

This chapter has explained the methodology used in this study. The study used a qualitative approach design. The study area was Ilume agricultural camp of Mkushi district in central province. The study population included all FISP beneficiaries who have been on the program for four years and more. The study sample comprised forty (40) FISP beneficiaries, 3 agricultural camp officers and the DACO. The sampling techniques included purposive sampling that was used to select the MoA officers while snow ball sampling technique was used for identifying the FISP beneficiaries who have been on the program for four (4) years and more. Snow ball was used because of lack of a sampling frame for the category of beneficiaries under the study. Data was collected using semi- structured questionnaires and FGDs from the FISP beneficiaries. Interview guides were used for collecting data from the MoA officers. The data analysis was done thematically but Microsoft excel was used for coming up with tables and charts.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the results of the study on the reasons for failure to graduate from the FISP by small scale farmers of Ilume agriculture camp in Mkushi, Zambia. Qualitative data is presented and discussed with the incorporation of the findings on the same theme obtained through the focus group discussions and key informant interviews.

4.2 Characteristics of Respondents

There were a number of characteristics that were examined and these included gender, age, marital status, level of education, household size, period on FISP, land ownership, main crop cultivated and length of stay in the village.

Table 4.1: Age and Gender characteristic of respondents

Characteristic	**Number**	**Percentage**
Gender		
Male	31	77.5
Female	9	22.5
Total	**40**	**100**
Age		
15 30	10	25.0
31 - 45	14	35.0
46 - 60	12	30.0
61 and above	4	10.0
Total	**40**	**100**

Source: Field data

4.2.1 Gender

Results from the study show that 77.5 % of respondents were male. There were more male respondents because generally males in the household culturally assume the role of head of household. The study targeted heads of households, therefore more males were interviewed. Only 22.5 percent of the respondents were females representing female-headed households and most of them occurred in situations where the women were single, divorced or widowed.

4.2.2 Age Distribution

Results from the study show that 25% of respondents were between 15 years to 30 years of age. Thirty-five percent of the household heads where aged between 31 years and 45 years while 30 percent were aged between 46 years and 60 years. The study further shows that only 10 percent of the respondents were 61 years and above. Age distribution is an important parameter in determining reasons for failure to graduate from FISP. Age analysis at national level indicates that about 68 percent of the household heads belongs to the age groups that are below 50 years, which is the economically active population (CSO, 2010). In this study, 60 percent of the respondents were in the age group of 45 years and below meaning the majority were in the economically active population and could be regarded as potentially productive farmers with capacity to graduate from FISP.

4.2.3 Marital Status of Respondents

The four categories of marital status in the study area were single, married, widowed and divorced. By far, the majority of the respondents were married (67.5 percent). Only 5 percent of the respondents were single.

Table 4.2: Marital status

Characteristic	Number	Percentage
Marital status		
Single	2	5.0
Married	27	67.5
Widow/widower	7	17.5
Divorced	4	10
Total	**40**	**100**

Source: Field data

4.2.4 Length of being on FISP

Table 4.3: **Length on FISP**

Period of being on FISP		
4-6 years	25	62.5
7 -9 years	12	30.0
10 and above	3	7.5

Source: Field data

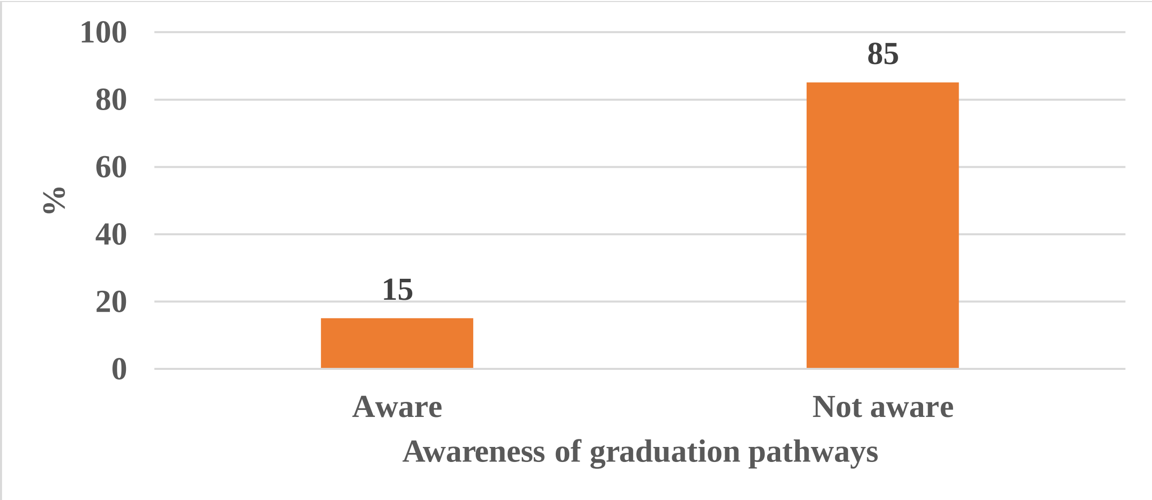
The length of being on FISP distribution show that the majority 62.5 percent of the respondents have been on the programme between 4 years and 6 years. Thirty percent of the respondents benefitted from the programme for between 7 years and 9 years, while 7.5 percent had been on the programme for 10 years and more. The length of being a beneficiary was important to the study because it helped tracking the progress of the beneficiaries for duration they were supposed to be on the programme.

4.3 Farmer's awareness of FISP pathways for graduation.

It has been observed from the study that the FISP was originally designed for farmers to be on the programme for three years and then one would graduate from the programme. The Mkushi DACO (Personal communication, 2018) explained:

> "*The system was initially designed to allow the farmers access inputs for two (2) seasons and become self-sustaining. However, now it has been revised to three seasons for one to be due for graduation.*"

It has been learnt from the study that even though the programme specifies that a beneficiary should only be on the programme for three years, the beneficiaries themselves are not aware of that provision. Figure 4.1 shows the responses of farmers on the awareness of graduation pathways. 85% of the respondents were not aware of any graduation after three farming seasons of being on FISP while only 15% were aware.



Source: Field data

Figure 4.1: Graduation awareness levels of beneficiaries

One FISP beneficiary in in the focus group discussion had this to say:

> "*We are not aware of the provision that we are supposed to be on the programme for three farming seasons only. This is the reason why some farmers have been on the programme for more than five years.*"

In terms of achievements that beneficiaries were expected to achieve in the three seasons of fertilizer support, the study shows that the beneficiaries are supposed to attain food security and increased incomes as part of the goals of the FISP objectives. Within the three years the beneficiary is supposed to be self-sufficient in his/her agricultural business. The Ilume camp officer (personal communication, 2018) explained that:

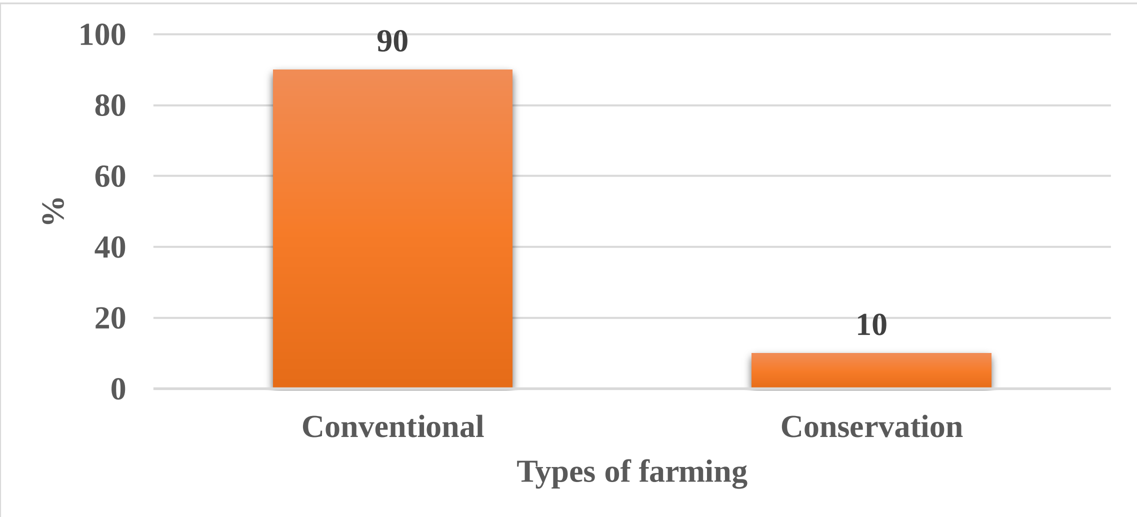
> "*It is envisaged that the beneficiary attains the skills in terms of farming techniques and also able to acquire business skills to enhance growth in farming. The beneficiary should also have achieved food security at the household level, decrease in poverty levels and improvement in their income*".

4.4 Farm management practices among beneficiaries that would lead to self-sufficiency and surplus production.

Farm management practices are critical in achieving better and higher yields that would help improve farm incomes which is one of the objectives of FISP. It emerged from this study that even though the small scale farmers use hybrid seeds that come with the FISP packs, they still use farm management practices that do not help improve their yields. It has been observed from the study that small scale farmers still use conventional agriculture practices which do not include crop rotation practices, the use of herbicides in weed control and this is regardless of how long one has been a beneficiary. For example, one of the Ilume camp officers (personal communication, 2018) said:

> *"Most of the small scale farmers under the FISP use conventional methods of agriculture that tend not to support higher crop yields regardless of how long one has been a FISP beneficiary. A good example is the use of archaic methods of weed control that involve pulling out by hand or weeding by using hand held hoes as their weed control methods. Most of the beneficiaries are mono-crop farmers who have no second crop for them to practice crop rotation which is so vital to improved yields."*

Figure 4.2 shows farm management methods that FISP beneficiaries use in their agriculture activities. 90% of the respondents use conventional farming methods while only 10% use the recommended conservation farming methods.



[Source: Failed Data]

Figure 4.2: farming methods used by FISP beneficiaries

Table 4.4 shows the reasons for not adopting the recommended conservation farming methods. The table show that 32.1 % of the respondents felt that it was too labour intensive, 31.2 % said they practice mono-cropping, 22 % attribute it to expensive chemicals while 14.7 % felt that conservation farming requires a lot of money which they did not have.

Table 4.4: Reasons for not adopting conservation farming.

Reason	Frequency	Percent
Monocrop	34	31.2
Expensive chemicals	24	22.0
Labour Intensive	35	32.1
Lack of money	16	14.7
Total	109	100.0

Source: field data.

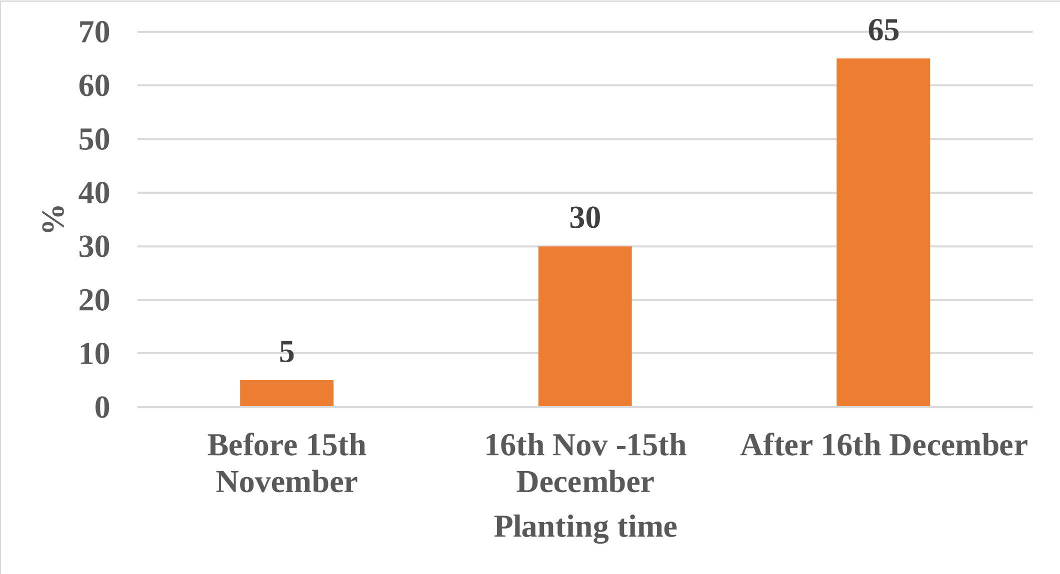
The study also revealed that most of the famers that participated in the study have been planting there crops towards end of December. The FISP input are delivered late most times thereby making farmers plant late against the late maturing varieties of seed they receive. One Ilume farmer in the focus group discussion said that:

> "*We start planting towards the end of December because the FISP inputs come late and apply basal dressing when the plants are at three (3) leaf stage*. *The top dressing is applied when the crop are 20 centimetres high*."

The Ilume camp officer (personal communication, 2018) also added that:

> "*Many times, inputs are accessed late by farmers thereby affecting the yields because of late planting. The example of this is the 2017/2018 FISP inputs that have come very late because some beneficiaries are accessing their packs in January*. *This disturbs the farmers planting calendars.*

Figure 4.3 shows the planting dates by FISP beneficiaries. Results from the study shows that 65% of the respondents plant their crops after 16th December while 30% plant between 16th November and 15th December. Only 5 % of the respondents plant before 15th November.



Source: field data

Figure 4.3: planting dates

When asked why most of the farmers plant late, the response was that because the inputs are received late. One of the farmers in the focus group discussion explained that:

> *"Most farmers plant late because the input support comes late. Farmers most times do not have an idea as to when they are most likely to receive their inputs. It is not just possible to plan for the following planting season as the arrival of inputs is not predictable."*

4.5 Farmer's perception of sufficiency of inputs received by each FISP beneficiaries.

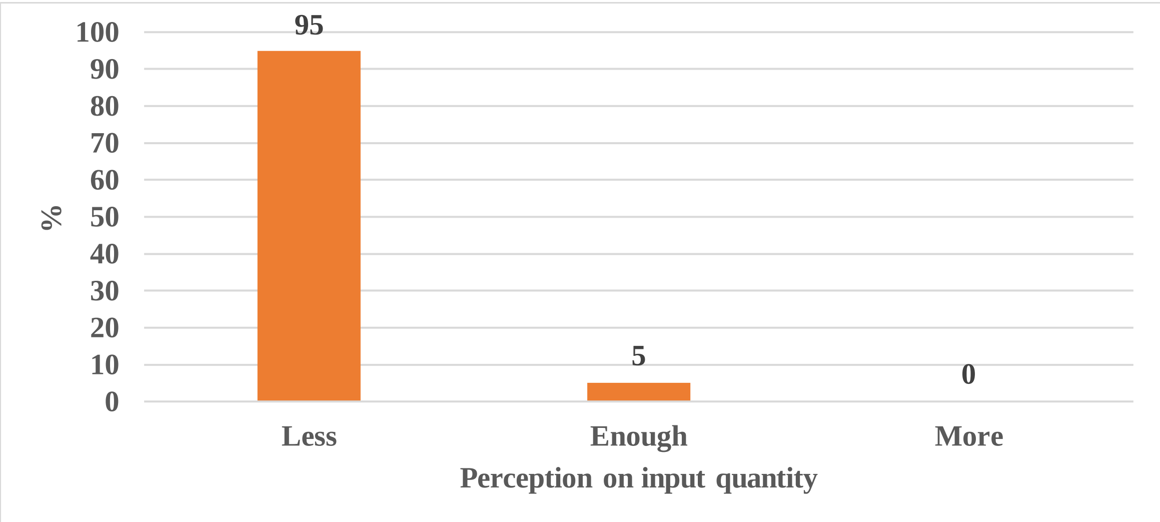
The objective was to establish the sufficiency of the quantity of inputs received by each FISP beneficiary. When asked how much inputs small scale farmers get from FISP, the farmers said that they receive 2 x 50 bags of basal dressing and 2 x 50 bags of Urea fertilizers. The input also includes a 10 kgs of hybrid maize seed. The farmers in the focus group discussion explained:

"Each FISP beneficiary gets one pack of inputs which comprises 2 bags of compound D and 2 bags of Urea fertilizer regardless of gender, age, marital status and length of being of FISP. The pack is meant for planting half a hectare of land.

The response from the farmers were confirmed by the Ilume camp officer (personal communication, 2018) who added that:

"The input support comprises of one pack for each benefitting farmer and cuts across gender, age and marital status. This is intended for supplementing farmers' efforts in growing more crops for food security, more income and poverty reduction."

When the farmers were asked if the input support was enough for their farming activities, their responses show that most of the farmers feel that the input support was not enough. Figure 4.4 shows the farmers perceptions of the quantities of input support they receive under FISP. The results show that 95 % of the respondents felt that input support was not enough while only 5 % of them felt it was enough



Source: Field data

Figure 4.4: Farmers' perception on sufficiency of input quantities

The farmers in the focus group discussion explained that:

"The input support is not enough as it only gives us enough for sustenance and nothing extra for sale. We are asking the government to increase the number of packs to enable us plant even just one hectare each. This will reduce our continued dependence on the FISP, because at the moment we only grow enough for food"

It has also emerged from the study that while the majority of the FISP beneficiaries use the inputs for the intended purposes, some of the beneficiaries either sell or divert the inputs to other crops. When asked how beneficiaries use the inputs they receive on FISP, one of the Ilume camp officers (personal communication, 2018) explained that:

> "*Many beneficiaries use the packs for the intended purposes of enhancing and supplementing their agricultural production while some tend to convert the inputs into cash and in most cases that money is just used on activities that do not improve the lives of the beneficiaries.*"

4.6 Summary

This chapter has presented the research findings of this study. The chapter started with the characteristics of the respondents. The characteristics of gender, age distribution, marital status and the length of one being on FISP was also considered. The study has revealed that the FISP beneficiaries are not aware of the FISP graduate pathways. The results also showed that the small scale farmers do not use the recommended conservation farming techniques that would lead them to higher yields. The results show that FISP receive 2 x 50kg bags of basal fertilizer and 2 x 50kg bags of urea fertilizer. There is no difference in quantities of inputs received regardless of age, gender and marital status. The results also showed that the quantities of inputs FISP beneficiaries receive are not enough to give those yields that can help improve their incomes and reduce poverty. The results also show that FISP beneficiaries have attained food security but have not managed to improve their incomes and that would lead to poverty reduction.

CHAPTER FIVE

DISCUSSION OF FINDINGS

Introduction

In this chapter, the research results presented in chapter four are discussed. The possible causes of the failure to graduate from the FISP will be explained. Furthermore, the chapter presents the answers to the research questions while at the same time using knowledge obtained from the literature review as provided in Chapter two as the basis of discussion.

5.1 Farmer's awareness of FISP graduation pathways.

In this study, it was established that small scale farmers under the FISP are not aware that they are supposed to graduate after three farming seasons. While many farmers have managed to attain one of the fundamental objectives of FISP, attaining food security and have benefited for three years but have not graduated, the program becomes silent on the graduation part. The implications of lack of clear policy and instructions means that beneficiaries can be on the program indefinitely. Lack of awareness of graduation pathways has developed a dependency syndrome for small scale farmers as they believe that they will be on the program forever.

The findings of this study are consistent with those of other researchers. The CSPR (2010:13) recommended that, "There should be an inclusion of the graduation clause in the FISP manual because the essence of the Farmer input Support Program (FISP) is to increase food security amongst poor small scale farmers and it is anticipated that with the passage of time, this goal would be achieved. It is thus against this understanding that we recommend that a clause on 'Graduation' must be included in the FISP program." DANIDA (2012) reveals that responsibility for implementing the graduation mechanism rested with the farmer cooperatives, who identify beneficiaries and prepare lists of selected farmers, as well as with the District Agricultural Committees (DACs), who approved the lists. The study reports shows that, in a survey of cooperative leaders, only 5% of them reported that previous support from the FSP was taken into account when selecting recipients. The study shows that DACs do not even check the lists for graduating farmers, let alone enforced the rule.

The study results shows that the FISP has achieved part of the objective which talks about improved food security. The program brought food security at household level as beneficiaries had food all the time. The findings however are in contrast with Magasu (2016) who carried out a study in Chiawa, Kafue district. Mugasu (2016), found out that despite benefiting from FISP, beneficiaries were still not food secure. Despite achieving food security, the program has however failed to get beneficiaries out of poverty and improve their incomes as stated in the main objective of the FISP, instead the program has stifled innovation on the part of the beneficiaries. This brought some form of dependence syndrome where the beneficiaries feel the programme should go on perpetually. The FISP is a necessary but not sufficient program for fighting rural poverty in Zambia. This is because it has not significantly improved the farmers' capacity to buy more fertilizer in order to increase their land under cultivation and become self-sustainable. Instead, they have used what they received from the program thereby developing a dependency syndrome (Nalishiwa, 2011: CSPR, 2010).

5.2 Farm management practices among beneficiaries that would lead to self-sufficiency and surplus production.

Results of the study show a lack of use of best practices in the beneficiaries' farming activities that would improve the yields. The small scale farmers of use conventional farming methods that do not support higher crop yields despite being highly recommended and trained to use conservation farming techniques.

Although the conservation unit has its presence in the area of Ilume, the response from the majority FISP beneficiaries towards the programme was not encouraging. Although the implementation of conservation agricultural practices is a strong recommendation by the Ministry of Agriculture, it has not been largely adopted by the farmers (CSPR, 2010). The use of conventional agriculture methods has contributed to perpetual low productivity which FISP beneficiaries experience in their agricultural activities (Chirwa and Dorward, 2013). Phiri (2013) reveals that conservation agriculture (CA) provides a system that enables farmers to be timely, accurate and efficient and its adoption among small scale farmers forms an important aspect of it. Efficiency will translate into improved yields and productivity which will ensure food security and increased income among small scale farmers.

The use conventional methods entail the use of hand hoes in the weed control. This is further complicated by the fact that the camp is in agro-ecological Region III, receiving annual rainfall in the range of 1,200 mm per annum from November to April. The hand weed control methods are not efficient in achieving a weed free field that would contribute to higher yields. Conservation farming techniques have been found to improve maize yields by 75 percent in certain trials (Aagaard, 2007:52). The use of the conventional methods of agriculture means that, late planting is norm and fertilizer application is done after the crop has germinated thereby losing that critical opportunity to improve productivity. Late planting has been found to have 4.2 percent knock off effect on the potential yields (Kapembwa *et al*, 2015). Conventional agriculture practices do not help farmers achieve surplus produce that will be enough for consumption and sell at the same time. The results mean that FISP beneficiaries are not taking agriculture as business but are there just for sustenance (Phiri, 2013).

The study also reveals various reasons for not using conservation farming by small scale farmers. However, the reason that conservation farming is labour intensive is the most prominent among the responses. These findings are supported by Mazvimavi, (2010) who found that labour intensity of conservation farming is one of the reasons for its slow adoption by small scale farmers. The study also reveals that FISP beneficiaries plant their crops late and they attributed the trend to receiving inputs late. The practice is one of the factors responsible for the low yields that most small scale farmers experience. These findings are supported by Mugasu (2016) who found out that FISP inputs are delivered late sometimes. The World Bank sponsored study (2010) also supports these findings when they revealed that the 2007/08 agricultural season was marked by serious problems with late delivery of FSP inputs. Across the sample, less than 4% of beneficiaries said they received their inputs by the end of October and 69% said they did not get their inputs until after the start of the rains. Timeliness of planting is extremely important with maize and there is no doubt this record had a significant negative impact on yields. This finding is in conformity with studies that were later conducted by CSPR (2011) in Mazabuka and Monze.

5.3 Farmer's perception of sufficiency of inputs received by FIPS beneficiaries

The FISP beneficiaries are given a pack each consisting 200kg of fertilizer translating to 2x50kg bags of basal dressing and 2x50kg bags of top dressing. The quantities are regardless of age, gender, marital status and length of being of FISP. This is however not enough to achieve the kind of production that would transform the beneficiaries' lives. The study shows that while the pack has helped farmers to be food secure, the packs are not enough to help people improve their incomes thereby coming out of the poverty. Nalishiwa (2011) supports this finding, "FISP is a necessary but not sufficient programme for fighting rural poverty in Zambia because it has not significantly improved the farmers' capacity to buy more fertilizer and make the farmers self-reliant. The quantity of fertiliser allocated per farmer is too low to move them out of the poverty trap (CSPR, 2010). The study further reveals that the input support has not led to any improvement in the small scale farmers' savings and poverty reduction as required by the FISP objective. The findings of this study are in direct contradiction with the findings by Nalishiwa (2011) who found out that the input programme has helped farmers to acquire assets that include oxen used as draft power and this would mean there are savings that would lead to self-sustenance.

The study reveals that FISP beneficiaries receive their inputs starting with the month of October and sometimes up to December. For the 2017/2018 inputs, some farmers were still trying to access their inputs in January 2018. Late receipt of inputs affects planning on behalf of small scale farmers thereby reducing efficiency and expected yields. A further reduction in the already low yields of small scale farmers reduces the chances of achieving the food security and improved income objective of FISP. The World Bank (2010) explains that the other objective of the FISP is to ensure timely, effective and adequate supply of agricultural inputs in the country. The study shows that the conventional FISP structure could not achieve the objective because of the centralisation of the procurement procedures. However, MoA officers explained that this will be a thing of the past due to the implementation of the e-voucher method that is designed to attend to the timely. Namonje *et al* (2015) estimated the effects of late delivery of FISP fertilizer on the technical efficiency of smallholder maize producers and on foregone national maize output. The authors found that late delivery of fertilizer negatively affects Zambian farmers' technical efficiency by a 4.2% reduction in maize production and yield. As a result, the foregone maize output was found to be 84,924 metric tonnes during the

2010/11 farming season. This loss in maize production was estimated at 21.2% of the total cost of the FISP program during the same season.

With respect to input usage among FISP beneficiaries in Mkushi, the study revealed that there were farmers who sell fertiliser under FISP for various reasons. While this habit of selling FISP inputs by beneficiaries was not done by all, a good number ware alleged to be selling. The study shows that while others sell, others apply the fertilizer on other crops like vegetables. Diverting fertilizer to other crops leads to reduction in fertilizer application that eventually leads to low productivity. The results of this study are supported by the findings of Mugasu (2016) who found out that small scale farmers sell their subsidised inputs for various reasons. The report suggests that some cooperative members were in habit of selling fertiliser because of high levels of poverty while others sell the inputs in order to buy food. These findings are further supported by CSPR (2010) which found out that some small scale farmers sell their FISP inputs in Senior Chief Ndzamane's area of eastern province of Zambia. A study by CDFA (2008:5) also confirmed that some farmers in Chipata who had accessed inputs later sold them to fellow farmers and traders. Lungu (2008) and Musonda (2008) also support the findings of this study on the sale of inputs.

Selling and diverting fertilizer to other uses other than the intended leads to fertilizer dilution which destroys the soils and lead to lower productivity. The study shows that even though some farmers sell their inputs, they still cultivate maize. This means that they do not apply the recommended rates of fertilizer application. These farmers do not buy additional inputs leading to dilution of fertilizer. At the Zambian recommended rates of fertilizer application, the FISP pack can only be enough to cover 0.6 Ha and yet on average, many famers cultivate more than 0.6ha and still manage with the fertilizer from the FISP. The explanation can be attributed to a tendency to dilute the fertilizer application rates. For example, the recommended application rate in Zambia is around 200Kgs/Ha for both basal and urea (Xu et al, 2009: Bunde, 2014). Xu emphasises that any diversion from recommended fertiliser rates may have serious consequences on output.

5.4 Summary

This chapter presented a discussion of the findings of the study by addressing each research objective or research question. The chapter began by discussing the FISP beneficiaries' awareness of graduation pathways. The lack of awareness has led farmers to become so dependent on the program so much that they do not prepared to graduate. The chapter also presented a discussion on the farm management practices. The beneficiaries have not adopted the recommended conservation farming methods. The use conventional farming methods has perpetuated low yields experienced by FISP beneficiaries. This has led to farmers only achieve food security but not improved incomes and poverty reduction as envisaged by the FISP general objective. The chapter also discussed the sufficiency of FISP inputs to the needs of the beneficiaries as the third study objective. The beneficiaries feel that the input support is not sufficient to lead them out of poverty and improve their incomes. While the beneficiaries have attained food security, they have failed to get out of the poverty trap.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Overview

This chapter presents the conclusions of the study findings and gives recommendations on the basis of these findings. The chapter is divided into two sections: conclusion and recommendations. It begins by making conclusions on the findings of the study and then giving recommendations to the study.

6.2 Conclusions

Based on the findings of the study, it can be concluded that FISP beneficiaries do not graduate due to various reasons. This study focused on the beneficiary's awareness of graduation pathways, farm management practices that would lead to self-sufficiency and surplus production and the sufficiency of inputs received by each FISP beneficiary as possible reasons for not graduating from the program.

The study has established that FISP beneficiaries are not aware of any graduation pathways from the program. The lack of awareness has made beneficiaries to believe that they are supposed to be on the input support forever. This has made farmers not to take farming as a business in order for but take it just for sustenance. The lack of awareness of graduation pathways have developed a dependence syndrome on the part of benefiting small scale farmers. It is for this reason that even if many farmers have attained the objective of food security and have benefited for more than four (4) years, none has graduated.

The study has also shown that FISP beneficiaries had not employed best practices in their agricultural activities. This is despite the fact that conservation farming is the highly recommended farming method for FIPS beneficiaries by the MoA. The use of conventional farming techniques had contributed to low productivity which FISP beneficiaries experiencing. On the other hand, conservation farming is responsible for the much needed efficiency and enhancement of productivity. Low productivity due to bad agricultural practices has made it impossible for farmers to improve their incomes and come out of the poverty trap and hence be self-sufficient as required by the program. Low productivity, low incomes and poor agricultural techniques has made farmers to remain poor and not be able to graduate as they fail to be self-sustaining even after being on the program for more than the stipulated three (3) farming seasons.

The study has established that FISP beneficiaries receive a pack each consisting of 200kg fertilizer translating to 2 x 50kg bags of basal dressing and 2 x 50kg bags of top dressing. However, the FISP input packs that farmers receive are not enough to help them attain the FISP objective of food security, improved incomes and poverty reduction as envisaged by the program in order to prepare for graduation. The study established that while the pack had helped farmers to be food secure, the packs were not enough to help beneficiaries improve their incomes thereby coming out of the poverty. FISP is therefore a necessary but not sufficient programme for fighting rural poverty in Zambia because it has not significantly improved the farmers' capacity to buy more fertilizer and make them self-reliant. Poverty has therefore remained the symbol of rural life despite the FISP. The study has also established that with the prevailing poverty levels among benefiting farmers, it is difficult for them to prepare to be weaned off.

The study also established that FISP beneficiaries receive their inputs late most times. For the 2017/2018 inputs, some farmers were still trying to access their inputs in January 2018. Late receipt of inputs affects planning on behalf of small scale farmers thereby reducing efficiency and expected yields. Late receipts of inputs had negatively contributed to the already existing low yields experienced by small scale farmers due to non-use of best practices in their agricultural activities. The late delivery of inputs go against the FISP objective which is intended to ensure timely, effective and adequate supply of agricultural inputs in the country. This practice of late delivery of inputs to farmers makes it difficult for them to implement best practices that require them to plant early.

It was also revealed that some FISP beneficiaries sell their subsidised inputs, while others sell, others apply the fertilizer on other crops like vegetables. The selling and diversion of fertilizer to other crops had led to the reduction in fertilizer application that eventually leads to low productivity because of not applying the recommended rates of fertilizer. The selling of inputs helps explain the persistent poverty found among the small scale farmers which is a hindrance to achieving the expectations of FISP on the benefiting farmers for them to graduate from the program.

6.3 Recommendations

The beneficiaries of the FISP have the potential to graduate from the programme and achieve the objectives of the programme if the following recommendations can be implemented;

Since the study shows that the FISP beneficiaries are not aware of any graduation pathways, it is recommended that the programme should be implemented in ways that actively promote graduation pathways. This is important so that farmers are aware of the stipulated time they are supposed to be on the program.

The study also shows that FISP beneficiaries are not employing the recommended best agricultural practices in their fields thereby perpetually getting low yields. The ministry of agriculture should make the use of conservation farming techniques mandatory for FISP beneficiaries so as to get yields that would make achieve the FISP objective of food security, improved income and poverty reduction thereby leading them to graduation.

The study has revealed that farmers receive a pack of 200kgs of fertilizer each which translates into 0.5 hectares of field. The production is only enough for sustenance and not poverty reduction with income improvement. It is therefore recommended that the government should increase the pack allocations for benefiting farmers to 400kgs of fertilizer and 20kgs of hybrid seed so that the farmers can have surplus crop production that would lead them to self-sufficiency and eventually graduation.

The study shows that farmers receive the FISP inputs late. The government should put in place mechanisms to ensure an early and timely delivery of FISP inputs to the farmers. This will help the farmers to implement the agricultural practices that require early planting like the recommended conservation farming.

It is also recommended that since this study focused primarily on identifying the reasons for failure to graduate from the FISP by small scale farmers of Ilume, Mkushi district, there is need in the future to conduct a study on the challenges small scale farmers face in accessing markets for their crops in Mkushi district. It is the researcher's view that such a study would contribute positively towards achieving the proper environment where agriculture is a business rather than for sustenance as currently is.

6.4 Summary

This chapter has presented the conclusions of the study based on the specific objectives of this study. Recommendations have also been made and directed to the MoA as an implementing ministry. The recommendations have been derived from the findings of the study. Finally, the study has also made a suggestion for future research.

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APPENDICES

APPENDIX 1: QUESTIONAIRE

Dear Respondent,

My name is Claremont Laki, I am a post graduate student at the University of Zambia conducting a study on the Reasons for failure to graduate from the Farmer Input Support Programme (FISP) by small scale farmers in Ilume Agricultural Camp of Mkushi District, Zambia. You have been selected to take part in this study. Please be assured that this study is purely for academic purposes, the information given will be treated with utmost confidentiality.

INSTRUCTIONS

- Do not write your name on this questionnaire
- Please tick or write in the spaces provided.

SECTION A

1.0 Socio-demographic Information

1.1 Age

1=	Below 30 years	[ ]	2=	31- 45 years	[ ]
3=	46 – 60 years	[ ]	4=	61 and above	[ ]

1.2 Sex of household head

1=	Male	[ ]	2=	Female	[ ]

1.3 Marital status

1=	Single	[ ]	2=	Married	[ ]
3=	Widowed/widower	[ ]	4=	Separated	[ ]

1.4 What is your level of Education?

1=	Primary	[ ]	2=	Secondary	[ ]
3=	Tertiary	[ ]	4=	None	[ ]

1.5 Household size

1=	1-3	[ ]	2=	4-6	[ ]
3=	7-9	[ ]	4=	10-12	[ ]
5=	Over 13	[ ]			

1.6 How long have you been a beneficiary of FISP?

1= 4 to 6 years [ ] 2= 7 to 9 years [ ]

3= 10 and above [ ]

SECTION B

2.0 To establish the management practices farmers use in their farming activities

2.1 What type of farming do you use?

1= Conventional [ ] 2= Conservation [ ]

2.2 If the answer to Q2.1 is 1, explain why you haven't adopted conservation farming?

…………………………………………………………………………………………………….

……………………………………………………………………………………………………

2.3 When does the household begin planting crops with FISP inputs?

1= Before 15th Nov [ ] 2= 16th Nov- 15th Dec [ ]

3= After 16th Dec

2.5 If the answer to Q2.3 is 3, why do you plant late?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

2.6 How do you control pests in your fields?

……………………………………………………………………………………………………

…………………………………………………………………………………………………….

2.7 Describe the weed control methods do you use in your fields?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

2.8. From the time you became beneficiaries of FISP, explain the food situation in your household.

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……………………………………………………………………………………………………

2.9 Have you ever had surplus produce to sale?

……………………………………………………………………………………………………
…………………………………………………………………………………………………….

SECTION C

3.0 To establish the farmer's awareness of FISP graduation pathways

3.1 Explain how long you are supposed to be on FISP?

……………………………………………………………………………………………………
……………………………………………………………………………………………………

3.2 Are you aware that you are supposed to graduate from FISP?

1= Aware [ ] 2= Not aware [ ]

3.3 If the answer to Q3.2 is 2, describe the changes you would have put in place to your farming knowing that you are supposed to be weaned off.

……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………

SECTION D

4.0 To establish the sufficiency of inputs each beneficiary get

4.1 How many packs of FISP fertilizer did you receive last season?

……………………………………………………………………………………………………
……………………………………………………………………………………………………

4.2 Do the number of packs change due to age, gender, marital status or the longer one has been a beneficiary? If the answer is yes, explain how

……………………………………………………………………………………………………
……………………………………………………………………………………………………

4.3 How big is the size of an area do you cover with the input pack you receive?

……………………………………………………………………………………………………
…………………………………………………………………………………………………….

4.4 How enough are the inputs you receive for your farming?

……………………………………………………………………………………………………
………………………………………………………………………………………………... …

4.5 How many bags of maize do you harvest from the 0.5 hectares of FISP inputs?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

4.6 How many 50kg bags of maize does your household requires as food each year?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

4.7 Describe the income levels in your households now that you are on FISP?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

4.8 Describe the savings status of your households now?

…………………………………………………………………………………………………

………………………………………………………………………………………………..

4.9 How easy is it to buy family needs now that you are on FISP?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

4.10 In the last three (3) years, have you ever bought any extra inputs?

YES [ ] NO [ ]

End of questions, thank you!

APPENDIX 2 INTERVIEW GUIDE FOR MINISTRY OF AGRICULTURE

Dear Respondent,

My name is Claremont Laki, I am a post graduate student at the University of Zambia conducting a research on the ‘Reasons for failure to graduate from the Farmer Input Support Programme (FISP) by small scale farmers’ in Ilume, Mkushi District, Zambia. You have been identified as one of the key informants in this study. Please be assured that this research is purely for academic purposes, the information given will be treated with utmost confidentiality.

INSTRUCTIONS

1. How is the FISP program designed to graduate farmers?
2. What achievements should a farmer attain for him/her to graduate?
3. Are there any famers who have graduated from FISP before?
4. If non, explain why
5. How is the food security situation for farmers on FISP?
6. How do you describe the nature of the popular agricultural system among the FISP beneficiaries?
7. Is there a recommended agricultural system for FISP beneficiaries?
8. If there is, describe the level of adoption.
9. How many packs of inputs does each beneficiary receive?
10. Is there any abuse of FISP inputs by the beneficiaries?
11. If yes, explain
12. What is the level of food security among the beneficiaries?
13. Have the objectives of FISP been achieved?

End of interview, thank you!

APPENDIX 3 FOCUS GROUP DISCUSSION GUIDE

My name is Claremont Laki, I am a post graduate student at the University of Zambia conducting a research on the 'Reasons for failure to graduate from the Farmer Input Support Programme (FISP) by small scale farmers' in Ilume, Mkushi District, Zambia. You have been identified as one of the key informants in this study. Please be assured that this research is purely for academic purposes, the information given will be treated with utmost confidentiality.

1. How aware are you that you are supposed to graduate?
2. What are the requirement for one to be a FISP beneficiary?
3. Describe the farming systems that you use?
4. Explain why you use the mentioned farming system.
5. Describe the yields from the mentioned farming system?
6. How is the food situation in the household now that you are on FISP?
7. Do your families have enough to eat all the time?
8. How are the household savings since being of FISP?
9. Describe the quantities of inputs each farmer receive.
10. How enough is the input support for your farming needs?
11. Have you heard of beneficiaries selling the inputs?
12. Do beneficiaries divert the fertilizers to other crops?
13. What recommendations would you give regarding the sufficiency of inputs?

APPENDIX 4: CONSENT FORM

UNZAREC FORM 1b

THE UNIVERSITY OF ZAMBIA
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

Telephone: +260-211-290258/293937 P. O. Box 32379
Fax: +260-211-290258/293937 Lusaka, Zambia
E-mail drgs@unza.zm

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

CONSENT FORM

(Translated into vernacular if necessary)

TITLE OF RESEARCH:

REFERENCE TO PARTICIPANT INFORMATION SHEET:

1. Make sure that you read the Information Sheet carefully, or that it has been explained to you to your satisfaction.
2. Your permission is required if tape or audio recording is being used.
3. Your participation in this research is entirely voluntary, i.e. you do not have to participate if you do not wish to.
4. Refusal to take part will involve no penalty or loss of services to which you are otherwise entitled.
5. If you decide to take part, you are still free to withdraw at any time without penalty or loss of services and without giving a reason for your withdrawal.
6. You may choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.
7. The information collected in this interview will be kept strictly confidential.
8. If you choose to participate in this research study, your signed consent is required below before I proceed with the interview with you.

VOLUNTARY CONSENT

I have read (or have had explained to me) the information about this research as contained in the Participant Information Sheet. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I now consent voluntarily to be a participant in this project and understand that I have the right to end the interview at any time, and to choose not to answer particular questions that are asked in the study.

My signature below says that I am willing to participate in this research:

Participant's name (Printed): ....

Participant's signature: .... Consent Date: ....

Researcher Conducting Informed Consent (Printed)..

Signature of Researcher: .... Date: ....

Signature of parent/guardian: .... Date: ....

APPENDIX 5: ETHICAL CLEARANCE

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Great East Road | P.O. Box 32379 | Lusaka 10101 | **Tel:** +260-211-290 258/291 777
Fax: +260-1-290 258/253 952 | **Email:** director@drgs.unza.zm | **Website:** www.unza.zm

Approval of Study

10th August, 2018

REF. NO. HSSEREC: 2018-JUNE-034

Mr. Claremont Laki
Ministry of Chiefs and Traditional Affairs
Department of Chief Affairs
P.O Box 840050
MKUSHI

Dear Mr. Laki,

RE: "REASONS FOR FAILURE TO GRADUATE FROM THE FARMER INPUT SUPPORT PROGRAM: THE CASE OF ILUME, MKUSHI DISTRICT"

Reference is made to your request for waiver of ethical approval of the study. The University of Zambia Humanities and Social Sciences Research Ethics Committee IRB has approved the study noting that there are no ethical concerns.

On behalf of The University of Zambia Humanities and Social Sciences Research Ethics Committee IRB, we would like to wish you all the success as you carry out your study. In future ensure that you submit an application for ethical approval early enough.

Yours faithfully,

Dr. Jason Mwanza
BA, MSoc, Sc., PhD
CHAIRPERSON
THE UNIVERSITY OF ZAMBIA HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE IRB

cc: Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies

Excellence in Teaching, Research and Community Service

APPENDIX 6: TIME LINE

- Collection of secondary data for literature review. The data was obtained from various books and publications from the University of Zambia library, Ministry of Agriculture, F.A.O, UNDP Library, CSO and the internet from 10th August, 2017 to 20th September, 2017.

- After data collection for literature review, the next activity was writing and editing the research proposal from 21st September to 10th November, 2017.

- The next activity involved the preparation of data collection tools (Questionnaire and interview guides) which took place from 11th to 25th November, 2017.

- The last activity on the proposal stage was submitting it. This was on 27th November, 2017.

- The next activity involved pre-testing of the data collection tools and this activity took a week to perform. This was done from 5th to 12th December 2017.

- After pre-testing, field work was done which is primary data collection using the data collection tools. This was undertaken from 14th to 25th December, 2017.

- The next activity was data analysis. This involved coding and transcribing the data. The activity was done from 5th January to 15th February, 2018.

- When data analysis was done, writing of the research report commenced and it took five weeks from 19th February to 30th March, 2018.

- After writing the report, editing and proof reading of the report commenced on 2nd April and ended on 15th August, 2018 with the final report to be submitted during the week starting 3rd to 7th September, 2018.

APPENDIX 7: BUDGET

Activity A

Literature review

The following was used for secondary data collection and was broken down as follows:

(a) Transport @ K50x4days	200.00
(b) Meals @K25 x 4days	100.00
(c) Pens @ K1x3	3.00
(d) Note book @ K10 x 1	10.00
SUB TOTAL	*313.00*

Activity B

Preparation of research proposal

The requirements for proposal writing were broken down as follows:

(a) Ream of paper@K50x1	50.00
(b) Pens@K1x3	3.00
(c) Typing@K2.50 x 44 pages	110.00
(d) Printing@K2.50 x 44 pages	110.00
SUB TOTAL	*273.00*

Activity C

Preparation of data collection tools

Preparation of data collection tools involved the following activities and amounts:

(a) Typing the questionnaire @K2.50 x 4	10
(b) Typing the interview guides @K2.50 x 3	7.50
(c) Printing @K2.50 x 7	17.50
(d) Photocopying @ 50 x 4 x 40	80
SUB TOTAL	*115*

Activity D

Pre testing of data collection tools

The following amounts of money was spent on pre testing of data collection tools:

(a) Transport to Ilume @K 50 x 2 days	100.00
(b) Lunch @ K25 x 2 days	50.00
(c) Pens @K1 x 2	2
(d) Note book @ K10 x 1	5
SUB TOTAL	*162.00*

Activity E

Primary data collection

The actual primary data collection used the following amounts of money and was broken down as follows:

(a) Transport to and fro @ K50 x 10 days	500.00
(b) Lunch @ K25 x 10 days	250.00
(c) Pens @ K1 x 5	5.00
(d) Note books @K10 x 2	20.00
(e) Back pack(bag) @ K170 x 1	170.00
SUB TOTAL	*945.00*

Activity F

Data analysis and writing Report

Data analysis and report writing used the following amounts and requirements:

(a) Ream of paper	50.00
(b) Folders	20.00
(c) Typing the report	100.00
(d) Binding the report	20.00
SUB TOTAL	*180.00*

Activity G

Submission of Report

(a) Transport	400.00
GRAND TOTAL	**2,167.00**