

**THE EFFECTIVENESS OF FARMER INPUT SUPPORT
PROGRAMME IN PROMOTING HOUSEHOLD FOOD
SECURITY: THE CASE OF CHIAWA, KAFUE DISTRICT**

BY

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A dissertation submitted to the University of Zambia in partial
fulfilment of the requirements of the Degree of Masters of Arts
in Development Studies.

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DECLARATION

I, Allan Magasu, 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.

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CERTIFICATE OF APPROVAL

This dissertation of Allan Magasu has been approved as a partial fulfilment of the requirements for the award of the degree of Master of Arts in Development Studies by the University of Zambia.

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ABSTRACT

Since 2002, the Government of Zambia has been funding a farmer input support programme (FISP) so as to ensure sustained food security at both household and national level. The programme is implemented by Ministry of Agriculture. The main purpose of this study was to establish the effectiveness of Farmer Input Support Programme (FISP) in promoting household food security in Chiawa. Consequently, a research was conducted in Chiawa whose 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. Qualitative data were analysed manually while quantitative data were analysed using a computer programme called Microsoft excel come up with tables, a charts and a histogram. A multi stage sampling procedure was used to select some respondents. The procedure employed both simple random selection and purposive sampling. Data for the study 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) where some FISP beneficiaries were randomly selected. Six (6) Village headmen and two (2) Ministry of Agriculture (MA) officials were purposively selected and interviewed topic. The analysis of this study revealed that each beneficiary of FISP received one pack of input consisting of 100kg (50kg x 2) basal fertiliser ,100kg (50kg x 2) top fertiliser and 10kg maize seed. Further, the study identified the following as factors that affect effectiveness of FISP in promoting household food security; inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to pay the required farmer contribution to access inputs, sale of inputs by some beneficiaries. The conclusion of study is 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. It 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 recommends a study be conducted to investigate on how FISP pack can be improved to promote household food security.

DEDICATION

To all my family members, friends and the people of Chiawa for their spiritual, moral and financial support. May God bless you all.

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LIST OF ACRONYMS

AISP	Agricultural Input Support Programme
CEO	Camp Extension Officer
CSO	Central Statistics Office
DMMU	Disaster Management and Mitigation Unit
FAO	Food and Agriculture Organisation
FEWSNET	Famine Early Warning Systems Network
FISP	Farmer Input Support Programme
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
HIPC	Highly Indebted Poor Countries Initiative
IFRC	International Federation of Red Cross and Red Crescent Societies
IFPRI	International Food and Policy Research Institute
ISPs	Input Support Programmes
MACO	Ministry of Agriculture and Cooperatives
MA	Ministry of Agriculture
NGO	Non-governmental Organisation
PMRC	Policy Monitoring and Research Centre
SADC	Southern African Development Community
SAO	Senior Agricultural Officer
UN	United Nations
VAG	Village Area Groupings
WFP	World Food Program
WFS	World Food Summit

CHAPTER ONE

INTRODUCTION

1.1 Overview

Despite numerous attempts by many developing countries and international organisations such as the Food and Agricultural Organisation (FAO) and the World Food Programme (WFP) to achieve food security, achieving food security in its totality has continued to be a challenge for many developing countries especially in Sub Saharan Africa. According to FAO *State of Food Insecurity* for 2012 about 870 million people are estimated to have been undernourished in the period 2010–12. This figure represents 12.5% of the global population. The vast majority of these, 852 million, live in developing countries, where the prevalence of undernourishment is estimated at 14.9% of the population (FAO et al., 2012).

1.2 Background to the Study

Since independence, in 1964, the Zambian government has continued to put agriculture sector high on the agenda as the potential engine for economic growth required to reduce poverty and promote food security. For instance, it has a long history of input price controls and subsidy programmes for maize. Before the introduction of structural reforms in the early 1990s, input prices and distribution was managed through the National Agricultural Marketing Board with the objective of keeping the prices as low as possible for small-scale farmers. Pan-territorial prices were maintained through subsidies to promote equity in fertiliser use and food production around the country. During this period, the state-owned firm, Nitrogen Chemicals of Zambia was the sole supplier and distributor of fertiliser in the country (Reich Huber et al, 2010).

From 1991, the Zambian government has devoted to liberalisation of the agriculture sector where the private sector is supposed to play a critical role in supply and marketing of agricultural inputs to small scale farmers. However, there is recognition of failure on the part of the private sector to provide adequate services. The failure of the agricultural sector to provide for livelihoods for the majority people in rural areas is considered a major factor contributing to rural poverty.

Given the highest rates of poverty in the rural areas and that agriculture is an important source of livelihood and income for most rural communities, support to small scale farmers has been identified as a priority by the Zambian government to reduce poverty and enhance household food security. As a result of this realisation, a broad range of policy reforms in the agriculture sector have been introduced to stimulate growth and improve the performance of the sector in order to reduce poverty and enhance household food security in the country. Specifically, in 2002, the Government of the Republic of Zambia launched programmes and policies under the framework of its Poverty Reduction Strategy Paper (PRSP) which in the agriculture sector, includes; the Fertiliser Support Programme (FSP), out-grower schemes, land and infrastructure development, technology development, agriculture extension, and maize marketing in support of small-scale farmers (GRZ 2004; World Bank 2002a, 2002b).

Fertiliser Support Programme was redesigned and renamed in 2009, to Farmer Input Support Programme (FISP). It was redesigned so as to improve access of small scale farmers to inputs such as seeds and fertiliser and enhancing the participation and competitiveness of the private sector in the supply and distribution of agricultural inputs timely and in adequate amounts. It was felt that increased accessibility to farm

inputs by small scale farmers would enhance participation and in the long run ensure sustained food security at both household and national levels (FISP Implementation Manual 2011/12:1; CSPR, 2010:7).

Realising the impact of the global financial crunch, the government decided to sustain the subsidy level at 75% of the cost of agricultural inputs under the FISP in 2009/2010 farming season. Furthermore, government increased the fertiliser quantities from 80 000 metric tonnes in 2008/2009 farming season to 100 000 metric tonnes in the 2009/2010 farming season. Government also reduced size of input pack from eight (8) 50 kilogram (kg) bags of fertiliser and 20kg bags of maize seed to four (4) 50kg of fertiliser and 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 from 250 000 to 500 000 (FISP Implementation Manual: 2011/12; The Zambian Economist, 2010).

1.3 Statement of the Problem

Food insecurity has continued to be a major challenge for many developing countries. According to FAO (2014) one in four people remain undernourished in sub-Saharan Africa representing the highest prevalence of all the regions in the world. Consequently, several national and international programmes and initiatives aimed at resolving food insecurity have been made. In 1996 for instance, World Food Summit of heads of states of FAO member countries was convened in Rome, Italy and resolved to reduce the number of hungry and undernourished people in the world from 800 million to 400 million by 2015 (FAO,1996 and IFRI, 2001). Since 1960s, most African and Asian States have often used farmer input subsidies programmes to promote agricultural productivity and food security both at national

and household. These inputs have often been in form of fertiliser and seeds. The Government of the Republic of Zambia (GRZ) has subsidised agricultural inputs in most years since independence.

In order to promote food security in the country, the government of republic of Zambia has subsidised agricultural inputs in most years since its independence in 1964. Chiawa is one of the rural areas in Zambia that has been benefiting from these subsidies. The area usually experience food insecurity. According to the Wellbeing Pathways Report: Zambia Round 1 food insecurity has led to compromised human well-being, hunger and malnutrition, thereby posing serious challenges to government and the communities of Chiawa (White et al, 2012).

In attempting to resolve this issue the Senior Agricultural Officer (SAO) and headmen revealed that Disaster Management and Mitigation Unit (DMMU) has been providing relief food almost every year to the area. For instance, in March, 2012 DMMU distributed a total 1 540 bags x 50 kg of maize in study sites. Distribution of relief food in the area almost every year is clear indication that the study area is indeed food insecure. Furthermore, the Ministry of Agriculture and Cooperatives by then launched FISP in the area in 2009. Under the programme the Ministry has been providing agriculture support in form of subsidised maize seeds and fertiliser to small scale farmers in the area. In spite of this support it is not clear why food insecurity has persisted in the area. Consequently, this has led to considerable contention among different stakeholders such as policy makers, international donors, international leaders and analysts regarding the effectiveness of FISP in promoting or contributing to household food security and the conditions under which it may or may not work. This may suggest that the programme has not been so successful in

contributing to household food security. This prompted the researcher to conduct a study to assess the effectiveness of FISP in promoting household food security.

1.4 Research Objectives

1.4.1 Main Objective

The main objective of this study was to establish the effectiveness of FISP in promoting household food security among the beneficiaries in Chiawa.

1.4.2 Specific Objectives

1. To investigate the quantity of inputs received by each FISP beneficiary.
2. To establish the state of food security at household level as a result of the FISP.
3. To determine the factors that affect the effectiveness of FISP in promoting household food security among the beneficiaries.

1.5 Research Questions

1.5.1 Main Questions

How effective is FISP in promoting household food security among the beneficiaries in Chiawa?

1.5.2 Specific Questions

1. What are the quantities of inputs received by each FISP beneficiary?
2. What is the state of food security at household level as a result of FISP?
3. What are the factors that affect the effectiveness of FISP in promoting household food security among the beneficiaries?

1.6 Rationale

Attaining food security among the rural households is one of the major development problems faced by many developing countries, including Zambia. The practical importance of this study is that its findings would provide useful insights and strategies that could enhance food security in rural Zambia especially in Chiawa. Further, the study may contribute to the body of knowledge that exists in the field of agricultural and food security. It may also serve as a vital source of information or reference for future researchers. Scholars from different disciplines such as Development Studies, Agricultural Science, Food and Nutrition, and Economic Policy Management may find the results of this study intellectually stimulating. The information generated from this study may also be useful to policy makers, MA, farmer organisations, Non-governmental Organisations (NGOs), bilateral and multi-lateral institutions and the international community interested in improving food security.

1.7 Limitations

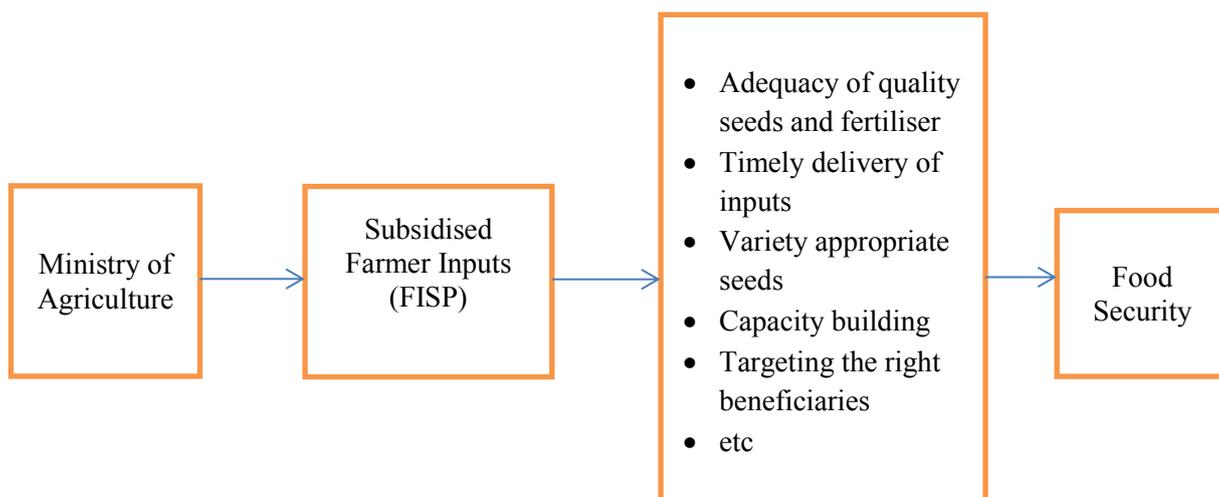
The observable limitation of this study is that it is not a general survey covering a large area like the entire Chiawa chiefdom. This was because the study was a case study premised on gaining deeper insights of the effectiveness of FISP in promoting household food security in Chiawa. This deprived the study of the benefits of breadth insights which could only be obtained by conducting a large scale survey. The results of the study are to be interpreted within the context of the study area and would in no way be taken as a reflection of what would be obtained in other areas. The extent to which the study can be generalised would also be compromised by the

small size of the sample due to time and financial resources that could not allow, a larger sample would require more time and more financial resources.

1.8 Conceptual Framework

The conceptual framework which guided this study is depicted in figure 1 on page 8. In this study, it was conceptualised that FISP plays an important role in as far as promoting or contributing to household food security is concerned. The conceptual framework below was constructed to try and analyse different aspects of FISP and how they relate to household food security. As can be seen from the conceptual framework below, the MA is responsible for implementing FISP by supporting small scale farmers with subsidised inputs (fertiliser and maize seed). Once the inputs have been provided, the assumption is that the MA will; support the beneficiaries with adequate quality seeds, deliver inputs to beneficiaries in time, deliver a variety appropriate seeds and fertiliser, build capacity in the beneficiaries and target the right beneficiaries. And assuming all other factors are in place this could translate into household food security. However, there are certain factors that may adversely affect the effectiveness of FISP in promoting household food security. These may include inadequacy of inputs and late delivery of inputs.

Figure 1: Conceptual Framework



[Source: Field Data]

1.9 Operational Definitions of Terms

Effectiveness: Beneficiaries of FISP and their household members have adequate food throughout the year.

Farmer Input Support Programme: is a Zambian government agricultural input subsidy programme that was designed to promote food security through the production of maize crop.

Household: Family members who live together.

Promoting: To contribute towards attaining household food security through maize, sorghum or cassava production.

Food Security: When many households have something to eat, at all times (in terms of quantity and availability) to feed their household. The aspect of nutritional content (quality) is ignored. For instance, 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, and household data collection was based on the concept of “enough” as perceived by the household. 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.

1.10 Organisation of the dissertation

This paper is divided into six chapters. Chapter one is an introduction to the study and provides an overview of global food security, background to the study, research objectives and the rationale of the study. Chapter two (2) reveals the relevant literature to this study. It begins by giving a historical overview of Farmer Input Subsidy Programme in Sub-Saharan Africa. 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. Conclusion of the study and recommendations aimed at promoting security in Chiawa are contained in chapter six.

1.11 Summary

This chapter presented the background to the study of FISP in Zambia. The chapter further 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 conceptual framework formed the plan of this study. The next chapter provides a review of literature of agricultural input in Zambia and other developing countries of positioning the study in the context of knowledge and identifying gaps in knowledge; hence justifying the need for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter is divided into two sections. The first section provides a historical overview of Farmer Input Subsidy Programme in Sub-Saharan Africa while the second section provides an empirical evidence of some studies that have been conducted on farmer/agricultural input support programme in Zambia and other developing countries.

2.1.1 Historical overview of farmer input subsidy programme in Sub-Saharan Africa

The evolution of farmer input subsidy programmes can be traced from 1960s to 1980s in many sub-Saharan Africa and Asian countries. Subsidies have been used as a keystone of agricultural development policy (Kherallah *et al.*, 2002 and Morris *et al.*, 2007). In Asia, subsidies are considered to have played an important role in promoting increased use of fertiliser and to have partly contributed to the significant increases in yields (Morris *et al.*, 2007), although their contribution to agricultural growth and poverty reduction after the initial phases is considered to have been very low (Fan *et al.*, 2007). These subsidies were commonly called “universal” subsidies. In Africa, these programmes were characterised by a government-controlled input (and output) marketing system, in which farmers were supplied with agricultural inputs at controlled and subsidised prices, and often on heavily subsidised credit. The experiences under these programmes were varied. The programmes for instance, succeeded in raising input use by small scale farmers and increasing agricultural productivity in many cases. On the other hand, many criticised them that they were

extremely expensive, tended to benefit relatively well-off and better connected farmers, and the advances in agricultural productivity were dependent on continued government support. Further, many economists argued that the fertiliser subsidy programmes were prone to inefficiencies arising from high administrative costs, government monopolies and political manipulation (Banful, 2010b). They contributed to governments' budget deficits and macroeconomic imbalances. Consequently, many African governments' deficits became unsustainable during the 1980s and early 1990s, international financial lenders such as International Monetary Fund gained leverage over national agricultural policies (World Bank 2009b). This compelled many African countries to adopt structural adjustment programmes. This, together with a shift of development paradigms towards structural adjustment, eventually led to the abandoning of fertiliser subsidies, the liberalisation of most fertiliser markets and a switch of fertiliser policy towards supporting the development of private-sector-led markets (Minot, 2009). Consequently, fertiliser input use and agricultural productivity declined (Crawford *et al.*, 2006).

After a period of liberalised input markets, new subsidy programmes began to emerge in several African countries. The Malawian government pioneered the return to large scale fertiliser subsidies in 1998 when it started distributing free fertiliser after having discontinued similar programmes in the early 1990s. In 2006, Nigeria, hosted the Africa Fertiliser Summit under the auspices of the African Union (AU), the New Partnership for African Development and the Nigerian Government. During the summit the Abuja Declaration on Fertiliser for African Green Revolution was made, in which AU member states set out to increase fertiliser intensity to an average of 50 kg/ha by 2015. During the summit African Ministers of Agriculture

committed to substantially raise the very low rates of fertiliser use across the continent with measures to reduce costs of fertiliser acquisition and supply; improve smallholder access by scaling up private sector and other supply networks; provide targeted fertiliser subsidies and invest in infrastructure, supplier finance and complementary seed and soil services; and improve trade flows (Africa Fertiliser Summit, 2006). One of the instruments in a five (5) point action plan was to implement smart subsidy programmes to improve access to fertilisers for smallholder farmers. These smart subsidy programmes are meant to address the shortcomings of the universal subsidies. World Bank (2007) identified specific criteria for “smart subsidy” programs to guide African governments. The most important of these criteria were that they (i) promote the development of the private sector; (ii) target farmers who were not using fertiliser but who could find it profitable to do so; (iii) are one part of a wider strategy that includes complementary inputs and strengthening of markets; (iv) promote competition and cost reductions by reducing barriers to entry; and (v) have a clear exit strategy.

Following the initial reports about the success of the first such targeted input voucher programme in Malawi and after President Bakili Muluzi of Malawi was awarded several prizes for allegedly turning the country from a food basket case to a food exporter. The Malawian government pioneered the return to fertiliser subsidies in 1998 when it started distributing free fertiliser after having discontinued similar programmes in the early 1990s. It was followed by Nigeria (1999); Zambia (2000); the United Republic of Tanzania (2002), Kenya (2006), Ghana (2008) and many others. After the 2008 food and fertiliser prices crisis, subsidies have become all the more popular as governments have felt the urge to quickly improve domestic food production and have been able to use direct budget support from donors who were

previously reluctant (Kelly *et al.*, 2011). Subsidies have also remained an attractive policy option for many national governments because they have been used for political mileage.

The global commodity price boom of 2008/09 also created additional impetus for Input Support Programmes (ISPs), by increasing the treasury resources of countries with mineral resources and most importantly, by raising food import costs and creating strong incentives to promote domestic food production. By the late 2000s, 10 countries were spending over US\$800 million annually on ISPs (Jayne and Rashid 2013).

2.1.2 Empirical Evidence

A review of literature shows that some studies have been carried out on farmer/agricultural input subsidy programmes in many countries such as Malaysia, Sri-Lanka, Malawi, Zimbabwe, Tanzania, Ghana, Kenya, Mali, Senegal and Zambia. The research findings of these studies have been varied depending on the specific objectives and therefore in the model and the variables under consideration.

Ramli *et al* (2012) for instance, conducted a study to assess the impact of subsidies on Malaysian staple food (rice). Their main objective was to assess the impact of fertiliser subsidy on Malaysia paddy/rice industry. Unlike the current study which used the mixed methods approach to analyse data, Ramli *et al* (2012) used system dynamics approach. Their study attempted to simulate the impacts of changes in government intervention policy on the fertiliser subsidy on the Malaysian paddy and rice industry using system dynamics model. Simulation result indicated that fertiliser subsidy does give a significant impact to the paddy and rice industry. Fertiliser subsidy increased the yield obtained and hence increases paddy production.

The removal of fertiliser subsidy decreased the paddy production and consequently, decreases the self-sufficiency level. With the removal of fertiliser subsidy the importation of rice seem inevitable due to the reduction in productions.

On the other hand Abeygunawardane (2014) conducted a research and attempted to answer to the question ‘why the subsidy on fertilisers for rice in Sri Lanka continued amidst a number of sustainability concerns?’ Guided by the foundations of post-positivism, critical realism, and systems thinking, the study used a mixed method approach. The key findings of this study suggested that the persistence of the rice fertiliser subsidy in Sri Lanka is best explained by a model of shared food preference. The social, political, and economic conditions in Sri Lanka engendered and accommodated ideals that elaborated the role of rice unparalleled to its economic value. Nurtured by this environment, both farmers and agriculture bureaucrats and researchers have, for different reasons, constituted a support for subsidised fertilisers. At the operational scale, the rice fertiliser subsidy of Sri Lanka has been an experience very similar to those subsidy schemes in other developing countries generating benefits in fertiliser usage and rice production, but falling below its full potential due to limitations in its own operational mechanism and deficiencies in its enabling environment. Constrained by the diminishing soil conditions – perceived to be the most critical among all variables deciding rice yields – farmers found the perceived benefits of the subsidy to be beyond material measure, mediating a strong support for its continuation. The agriculture bureaucrats and researchers’ support for the fertiliser subsidy was largely driven by ideals of nationalism, development, and nutrition. To these ideals achieving self-sufficiency in rice was of the highest priority. Science’s contribution to policy was severely constrained by this cultural

construct of rice and hence the policy choices. Therefore, the study concludes that the reason for continuing the rice fertiliser subsidy scheme in Sri Lanka is its people's intimate preference for rice that is shared across the social spectrum.

Unlike Abeygunawardane, Kamanga (2010) undertook a study to investigate the role of agricultural input subsidy programme on poverty reduction in rural Malawi using the Individual Household Modeling Approach. His study was based on information derived from a village in Chingale area in Zomba district. Using a "with" and "without" the subsidy project evaluation approach, the study made a comparison of the ultra-poverty and poverty rates in the two scenarios. The study finding revealed that Agriculture Input Subsidy Programme had a positive impact on the poverty rate. However, the programme did not affect the proportion of households living below food security threshold. The poorest of the poor were not made any better off as a result of the AISP. The implication was that on average, the food security situation of the lowest income group was not improved by the subsidy programme. Moreover, the maize price escalations that occur during the traditional lean months of December to February implies worsening food security situation for all maize deficit households and more so for the ultra-poor since it usually means surviving on less than the required kilocalorie intake. However, complete coverage of smallholder households with one 50kg bag of fertiliser is expected to greatly reduce both the poverty and ultra-poverty rates.

Further, Kamanga (2010) examined the targeting efficiency of the AISP and found that the programme was biased towards the richer households. Although that conforms to the programme's design structure, it was also a constraining factor to the programme's effectiveness as a social safety net tool. Similarly, the current study

sought to establish the effectiveness of FISP in promoting household food security in Chiawa and determine the factors that affect the effectiveness of FISP in promoting household food security. Just like Abeygunawardane (2014), the study also employed mixed method approach to analyse its findings.

On the other hand Sibande (2016) conducted a study to analyse the impact of farm input subsidies on farm households' maize market participation, welfare and migration by using the most recent nationally representative integrated household panel survey data for Malawi of 2010 and 2013. The study used different indicators and empirical models from the ones used in the existing literature on food marketing, household welfare and migration effects of farm input subsidies are used to explore more empirical evidence. The main findings are that farm input subsidies increase farm households' market participation and food security; and reduce household members' migration. The results on market participation indicate that subsidised fertiliser increases both farmers' maize market participation as sellers and quantities they sell. On migration, subsidised fertiliser reduces rural to urban and rural to rural migration of household members. While on household welfare, the results suggest that subsidised fertiliser increases available per capita calories per day, household's months of food secure, an probability of being food secure from own production of cereals and legumes, but has statistically insignificant effects on household annual consumption expenditure.

In Kenya, Bunde et al (2014) undertook a study to assess the impact of fertiliser input subsidy on maize production in Nandi North district. One of their objectives was to investigate the impact of farm input subsidy program on maize productivity and household food security. The results of this study revealed that maize

productivity increased. Before implementation of the programme, majority of respondents; 77.5% were harvesting 0-10; 90 Kg Bags/Acre and 22.5% reported that they harvested 11 – 20; 90 Kg Bags/Acre of maize. The results of the study indicated that there had been a reported increase in maize yields amongst the beneficiary farmers. The results showed that maize production increased with 17.2% of respondents harvesting between 0-10; 90Kg bags of maize, 26.5% harvesting 11 – 20; 90Kg bags of maize, 38.4% harvesting 21-30; 90Kg bags of maize, 15.2% harvesting 31 – 40; 90Kg bags of maize and 2.6% of farmers harvesting 41 – 50; 90Kg bags of maize. Productivity at farm level among the beneficiaries had increased. There was also reported incidences of farmers who harvested >50; 90; Kg bags of maize per acre after the implementation of the subsidy program in the district. According to the study the increased maize production combined with good weather enhanced household food security.

Civil Society for Poverty Reduction (CSPR) undertook a comparative study in 2005 that was aimed at assessing the implementation process of the FSP and its impact on food security among the beneficiaries in three districts; Kalomo, Mumbwa and Mpika covering all the three agro-ecological zones in Zambia. The analysis of the findings of this study indicated that the FSP had very little impact on the food security and poverty reduction. Further, the study also investigated the factors the effectiveness of the FSP in respect with implementation process and food security; The study identified the following; (a) Inconsistent supply of inputs and sometimes fertilisers arriving earlier than seed (b) Delays in input supply (c) Few buyers and poor transport facilities (d) Inadequate supply of farm inputs (e) Poor marketing arrangements which includes delays in payment to farmers for farm produce during

the marketing season (f) Lack of or non- use of satellite depots (g) Poor record keeping of the fertiliser applicants and delivery records (h) High input prices and low prices for farm produce (i) Lack of monitoring and evaluation of the programme.

In order to better understand the effectiveness and efficiency of FSP in Zambia, World Bank conducted a research on behalf of the Zambian government by focusing on the 2007/08 agricultural season. With regard to impact on maize production, the study by World Bank revealed that careful analysis of the survey data suggested that somewhere between 82,000 to 146,000 tonnes of new (incremental) maize could be fairly attributed to the 2007/08 FSP in all parts of Zambia depending on the change in area cultivated. This estimate was 61-78% less than MACO's estimate of 375,000 tonnes of incremental maize (Reichhuber, 2010). Data was collected from 20 districts in five provinces chosen at random. On the contrast, the current study is a case study that focused in only one area of Kafue district.

A study by Chipata District Farmers Association (CDFA) (2008) conducted a community based monitoring and evaluation system whose main objective was to monitor how the 2007/8 FSP was implemented. The project findings concluded that the biggest reason why the programme had not achieved its objective of improving food security and reducing poverty was because of lack of community participation in its planning, implementation, monitoring and evaluation. Lack of participation by the communities/beneficiaries led to less packs being allocated to beneficiaries, corrupt practices and lack of transparency and accountability in the implementation of the programme.

In order to assess the impact and efficiency of FSP on food security among small scale farmers in rural Zambia, Nyamfalila (2010) conducted a study in Chongwe

district. He analysed his data using both qualitative and quantitative methods. The results of the Study showed that the FSP contributed to a moderate improvement in food security during the 2006/2007 farming season. According to the results, maize production, maize sales and income earned by small-scale farmers only improved to a modest level during the same period. This could be partly attributed to late delivery of a large quantity of the inputs that came after October. Inputs were expected to be in Chongwe by October as stipulated in the FSP implementation manual. Other challenges were poor crop marketing arrangements, and lack of funds by some small-scale farmers to meet the required contribution of 40% payment. Other challenges identified were non-usage of satellite depots, poor feeder road network, lack of Animal Draught Power (ADP), non-practice of conservation farming/crop diversification and unpredictable government policies on maize and fertiliser marketing. These challenges affected production of maize and food security and consequently contributed to food insecurity in Chongwe district.

In 2011, CSPR again, conducted a similar study in Mazabuka and Monze. The main objective of the study was to assess the implementation and viability of the FISP and its impact on food security among beneficiaries. The research findings revealed that the implementation of the programme involved a number of stakeholders such as the Civil Society although at district and provincial level it was missing. On viability some respondents expressed anxiety and one of the respondents said “we shall die if weaned off from the programme”. This was an indication of how unsustainable the programme is. The study concluded that there was little impact of the FISP on reducing poverty and that FISP had only registered gains in increasing household food security but had failed at generating income for farmers. While this study

focused on implementation and viability of FISP, the current study focussed on effectiveness of FISP in promoting household food security in Chiawa.

Nalishiwa (2011) undertook a study in Mwembeshi that departed away from other studies reviewed so far. His specific objectives were to assess the effect of the FISP on asset development for rural small-scale farmers and to determine whether FISP had managed to reduce cost of production for small-scale farmers thereby overcoming their structural inefficiencies. Unlike the current study, his study used quantitative methods. The methods of analysis he used were descriptive statistics for each sample group, gross margin analysis (GMs) for national data and linear/log production function analysis using the Ordinary Least Square (OLS) criterion applied on the whole sample. This method is not best suited for impact analysis due to its cross sectional nature, small sample size and lack of baseline socio-economic condition by the beneficiaries. With respect to the first objective, his study however, revealed that the majority of small-scale farmers demonstrated low access to assets hence the perpetual poverty. However, through its mode of transmission the fertiliser subsidy which is used in larger quantity by the beneficiaries- the FISP had effectively helped members accumulate assets though not sufficient enough to propel them out of poverty. Further, the study revealed that the cost of production was high despite the implementation of FISP in the study area due to the low scale of production.

On the other hand, Siansanje (2013) undertook a quantitative research to investigate the impact of FISP on benefiting households in Gwembe district. He also investigated the effect of the input subsidies on household's dependence on subsidies in maize production. He analysed his data using using quantile regression at the

5th, 10th, 50th and 90th percentiles of the maize production distribution in two phases - with and without control for endogeneity. The analysis of data revealed that the largest production impact was only on the farmers at the 50th percentile thereby casting a doubt on the efficacy of the programme to reduce poverty and improve household food security. In relation to dependence on subsidies, the study revealed that there was significant dependence on the subsidies by households at the 5th and 10th percentiles.

Although similar studies have been conducted in Zambia and other developing countries, the literature reviewed above demonstrated the uniqueness of this study. Literature reviewed above shows that studies that have been conducted in Malaysia for instance, but focussed much on assessing the impact of fertiliser subsidies on paddy/rice industry and not household food security. In Sri Lanka the study reviewed shows that its main focus was to understand why the subsidy on fertilisers for rice in Sri Lanka continued amidst a number of sustainability concerns. Another study in Malawi, for instance by Kamanga (2010) investigated the role of agricultural input subsidy programme on poverty reduction in rural Malawi using the Individual Household Modeling Approach while the current study focused on effectiveness of the programme (FISP) in promoting household food security. Literature reviewed also shows that similar studies in Zambia have been conducted by CSPR (2005), CDFA, (2008), Reichhuber, (2010), Nyamfalilia (2010), CSPR (2011), Nalishiwa (2011) and Siansaje (2013). However, none of these studies focused on Chiawa. Further, studies conducted by Reichhuber, (2010), Nalishiwa (2011) and Siansaje (2013) for instance employed quantitative methods while the current study employed mixed methods.

2.2 Summary

This chapter provided a historical overview of farmer input subsidy programme in Sub-Saharan Africa and empirical evidence of some studies that have been conducted in Zambia and other developing countries on farmer input subsidy programmes. The literature has also demonstrated the uniqueness of this study. The next chapter will present the methodology of the study.

CHAPTER THREE

METHODOLOGY

3.1 Overview

The chapter is divided into nine sections. The first section is a description of the study area while the second section is a presentation on research design employed. The third section is the discussion of the research methods while the fourth section discusses the target population. The fifth section presents sample size and sampling techniques. The last three sections are discussion on research tools and data analysis methods and ethical consideration respectively.

3.2 Area of Study

The study was conducted in Chiawa, Kafue district. Chiawa lies approximately 170 km south-east of Lusaka (Capital City) in the lower Zambezi Valley. It is defined by natural boundaries. On the southern side runs the Zambezi River, forming the international border with Zimbabwe. On the northern side stands the Zambezi escarpment, rising 900 metres above sea level to the central Zambian plateau. To the west, the area is bordered by the Kafue River, and to the east lies the Chongwe River, beyond which is the Lower Zambezi National Park. Both the Kafue and Chongwe rivers are tributaries of the Zambezi. Chiawa chiefdom is in Kafue district in Lusaka province (<http://www.hodi.org.zm/index.php?sid=1891>).

According to 2010 Census Preliminary Report, Kafue district has a total population of 242 754 with 46 124 households while Chiawa Chiefdom has a total population of 10 816 with 2 261 households (CSO, 2010:40).

3.3 Research Design

A research design is a framework for the collection and analysis of data (Bryman 2008:31). For this particular research a case study approach or exploratory study was chosen. A case study or exploratory study was found to be ideal for this particular study as it brings out facts and insights about the topic under investigation. The method was also influenced by Yin. Yin (2003) argues that a case study approach is appropriate when the focus of the research is on a contemporary phenomenon within a real-life context. In such settings case studies are helpful in bringing up in depth insights of the study.

3.4 Research Methods

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. Qualitative analysis is characterised by the collection and analysis, of textual data which are surveys, interviews, focus groups, conversational analysis, observation on the context within which the study occurs. It allows the researcher to make connection between the study and her situation (Olds et al., 2005 and Borrego et al., 2009).

According to Johnson and Onwuegbuzie (2004), mixed method is a class of research in which the researcher combines qualitative and quantitative research techniques, methods, approaches, concepts or language into a single study. In spite of the differences in the epistemological beliefs between qualitative and quantitative study, this shouldn't prevent a qualitative researcher from utilising data collection methods associated with quantitative research and vice versa. This is because both orientations have their strengths and weakness, and the two approaches can thus be

used to complement each other. Hammersley, (in Bryman, 2008: 607) justifies the use of mixed methods by arguing that;

- (i) It helps to triangulate or confirm the findings from either qualitative or quantitative
- (ii) the approach also helps in facilitating research, that is to say, one research strategy is employed to aid research using the other, that is to say, in the event of one method of qualitative approach failing to bring out the results properly, the other method of quantitative is employed.
- iii) Its another way through which different aspects of an investigation can be merged together.

Based on these arguments this study found (mixed methods) qualitative methods to be helpful alongside quantitative methods.

3.5 Target Population

Polit and Hungler (1999) defined a study population as the totality of all subjects that conform to a set of specifications, comprising the entire group of persons that are of interest to the researcher and to whom the research results can be generalised. Similarly, Salant and Dillman (1994) described the population in a study as a group of experimental data or persons. With the definitions given, the study population for this study were FISP beneficiaries in, Chairpersons of Cooperatives/ farmer organisation, Village headmen and women, and MA officials in Chiawa.

3.6 Sample Size and Sampling Techniques

A multi-stage sampling procedure was used to select the study sites from which members of the farmer cooperatives/association and key informants were selected as respondents. Chiawa is divided into five (5) Village Area Groupings (VAGs) namely Gota Gota, Kabbwadu, Chiawa Central, Kanyangara and Mugurameno. The

randomly selected VAGs were Chiawa Central, Mugurameno and Kabbwadu. Chiawa Central, Mugurameno and Kabbwadu had only one cooperative each. These are Chiawa Multi-Purpose Cooperative and Chimusambo - Mugurameno Cooperative Society Limited while Kabbwadu VAG had one farmer association called Munsanja Multi-Purpose Association respectively. Munsanja Multi-Purpose Farmer Association has 40 registered members, Chiawa Multi-Purpose Cooperative has 37 while Chimusambo - Mugurameno Cooperative Society Limited has 35. The total being 112. As shown in table 1, the data were collected from primary sources. Twenty one (21) small scale farmers were randomly selected using the 2009/10 to 2011/2012 FISP beneficiaries lists obtained from the cooperatives and farmer association. Considering the nature of this research which is mainly qualitative twenty one (21) respondents were enough to provide the required information about this research. A total of Six (6) Village headpersons from the Chiawa Central and Mugurameno and Kabbwadu were also randomly sampled. Three (3) FGDs each with seven (7) participants were purposively selected in consultation with the chairpersons of the two cooperatives and farmer association and village headpersons. Three (3) FGDs were also adequate for a research of this nature. According to chairpersons and village headpersons the selected participants in FGDs were better placed to provide relevant insights about the research. FGDs were particularly important in order to gain an overview of other members not interviewed individually.

Three (3) Chairpersons of cooperatives, SAO and CEO were purposively selected by virtue of the official positions they held in the MA in the study area thus were right respondents to provide the required information regarding the topic under study. Key informers were able to give important insights on the study.

Table 1: Composition of sample; FISP Beneficiaries

FISP Beneficiaries -interviewed individually (7x3)	21
Chairpersons of Cooperatives (1x3)	3
Village Headpersons (2x3)	6
MA officials (SAO and CEO)	2
FGDs Participants (7 x 3)	21
Total number of respondents	53

3.7 Research Tools

A broad range of data was collected using both semi structured questionnaires and interviews guides. Semi structured questionnaires were used to collect data from the primarily respondents (FISP beneficiaries that were interviewed on one to one basis). The Questionnaires were administered to the respondents by the researcher since almost all respondents could not read and write properly. A semi structured questionnaire has an advantage in that closed ended questions ensured standardisation of responses while the open ended questions brought out new ideas that had not been conceived by the researcher.

Interview guides were administered to Village headpersons, Camp Extension Officer (CEO), SAO when conducting in-depth interviews. Interview guides were also used to collect data in Focus Group Discussions (FGDs). Interview guides were found to be ideal because they facilitated adaptability of formulation of questions and terminology to suit the interviewee's background and educational level and they eliminate a level of rigidity that is common in structured interviews. They are also ideal when collecting in depth information on the subject which was the case with this study. Furthermore, an interview guide allowed the researcher to probe on

certain issues raised by the interviewees that were of particular interest to the research. The use of the two tools in information gathering complemented each other to allow triangulation and validation of the information.

3.8 Data Analysis

Data processing and analysis were largely conducted using qualitative methods. Qualitative data were analysed manually while quantitative data were analysed using a computer programme called Microsoft excel to come up with tables, charts and histograms. Further, raw data were sorted out, analysed and presented according to themes as derived from research questions. According to Braun and Clarke (2006:82) “A theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set.” This is referred to as thematic method of analysis. According to Boyatzis (1998), thematic analysis is a qualitative analytical method for identifying, analysing, and reporting patterns (themes) within data. The method minimally organises and describes data set in (rich) detail and often goes further than this, and interprets various aspects of the research topic.

3.9 Ethical Considerations

The research was guided by the principles guiding ethical research in the social sciences. Abiding by the ethic of respecting the traditional leadership in the communities, permission was sought from the chieftainess and village leadership to carry out the research in their villages. Thus communities’ culture and leadership was respected. And just before interviews, permission was obtained from all respondents, that is, their informed consent to undertake the research with them as a sample of the study. Thus participation in the research was voluntary and no participant was unethically coerced to participate in the research against his/her will.

The nature and purpose of the study was explained to the respondents before the interviews as well as the benefits of taking part in the research.

3.10 Summary

This chapter began by describing the area of study and went on to identify and describe the research design of the study. The study argued that qualitative research design was appropriate as it brings out the deeper understanding of the situation.

After discussing the research methods, the study went on to discuss the target population of the study, the sample size and sampling techniques employed, data collection tools and how data was analysed. The last part was discussion on ethical consideration. The next chapter presents the findings of this study.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Overview

This chapter is divided into two sections. The first section begins by giving background information of the respondents while the second part is a presentation of the research findings in relation to the three research objectives of the study. The findings have been systematically presented according to the headings that have been derived from the research questions. Quantitative data has been presented using charts, tables and histograms. Qualitative data has been enhanced by verbatim excerpts of the interviews were transcribed and reported directly in the report.

4.2 Demographic characteristics of some respondents

This section presents demographic characteristics of 21 FISP beneficiaries that we interviewed on one to one basis.

The social characteristics in this research included;

- a) Age and Marital status of respondents
- b) Education level of respondents

The age distributions and marital status of the respondents, is presented in *Table 2*.

The majority (5) of the respondents were between 36-40 and 46-50 years. Between 51-55 and 56-60 it was zero (0).

Table 2: Age range of FISP beneficiaries (interviewed on one to one basis)

Age Range	25-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	Total
Male	1	0	3	1	3	0	0	1	0	9
Female	2	4	2	1	2	0	0	0	1	12
Total	3	4	5	2	5	0	0	1	1	21

Source: Field Data

Table 3: Marital status of FISP beneficiaries (interviewed on one to one basis)

Marital Status	No.	Percentage (%)
Single (includes the divorced and widowed)	5	24
Married	16	76
Total	21	100

Source: Field Data

In terms of the marital status of the respondents, the data show that 24% of the respondents were single (this category includes the divorced or widowed), while 76% of the respondents were married (*see Table 2*).

Table 4: Education level of FISP beneficiaries (interviewed on one to one basis)

Education level	Male		Female	
	No.	Percentage (%)	No.	Percentage (%)
No formal Education	0	0	1	4.8
Primary	7	33	10	48
Junior Secondary (Grade 8-9)	1	4.8	1	4.8
Tertiary Education (Diploma)	1	4.8	0	0
Total	9	42.6	12	57.6

Source: Field Data

Table 4 Summarises the educational level of respondents. As can be seen from the table, 7 males (about 33%) and 10 (about 48%) female attained primary school while one male and female went up Junior Secondary school. One respondent had a Diploma. As can be seen the majority (about 81%) attained primary schools.

4.3 Quantities of inputs received by each FISP beneficiary

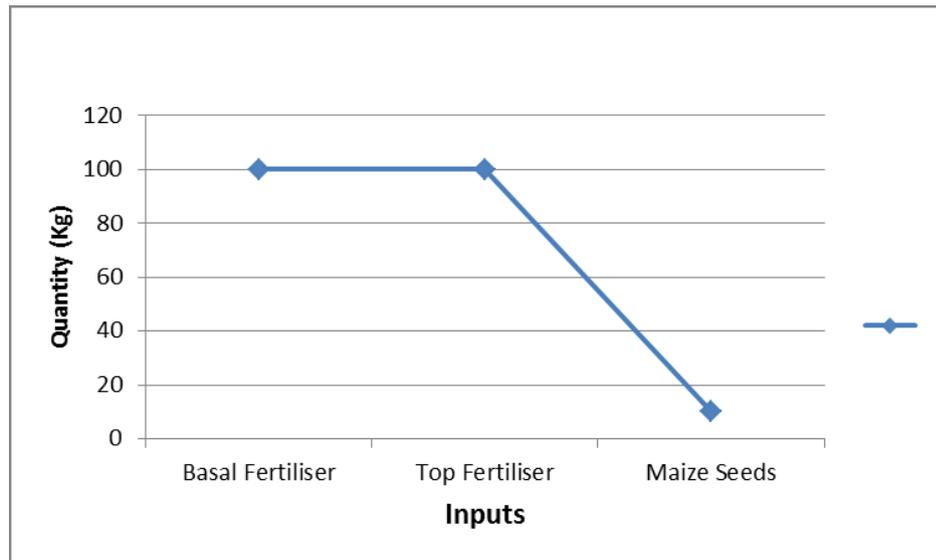
In order to respond to research question one, which sought to investigate the quantities of inputs received by each FISP beneficiary, a question was asked; *what are the quantities of inputs that you received?* All the respondents interviewed indicated that each beneficiary of FISP received 100kg (50kg x2) basal dressing fertiliser, 100kg (50kg x2) top dressing fertiliser and 10kg of maize seeds. One respondent from the Ministry of Agriculture had this to say:

“We give our small scale farmers a pack each. Each pack contains 100kg basal dressing fertiliser and 100kg of top dressing fertiliser and 10kg of

maize seed. As a ministry, we are aware that these inputs might not be adequate for most farmers but we expect them to supplement these packs.”

Figure 2 shows the quantities of inputs which were received by each FISP beneficiary.

Figure 2: Quantities of inputs received by each FISP beneficiary



However, when the respondents were asked if the FISP pack was sufficient to secure household food security, all the beneficiaries indicated that the pack was far from being sufficient. One beneficiary in the focus group discussion had this to say:

“Our fields are vast and a pack of 10kg maize seed is surely a drop in the ocean. Furthermore, Chiawa is a drought prone area and sometimes when we plant the maize, it is scorched by excessive heat and this means we have to replant the maize. By then, the FISP pack would have gone to waste.”

4.4 State of food security at household level as a result of FISP

When all the forty two (42) beneficiaries were asked if their household had attained household food security as a result of FISP, all of them indicated that they were not food secure. The table below shows the responses from the FGDs participants on household food security.

Table 5: Food security status as of FISP

Cooperative/Association Name	Focus Group Discussion Participants		State of Food Security as result of FISP
	Male	Female	
Munsanja Farmers Association	7	0	Food Insecure
Chiawa Multi-Purpose Cooperative	0	7	Food Insecure
Chimusambo - Mugurameno Multi-Purpose Cooperative Society Limited	7	0	Food Insecure

One respondent from the FGD had this to say:

“We do not manage to have three (3) meals in a day. We only manage two (2) meals in a day and at times one (1). We cannot therefore claim to be food secure.”

Another respondent from the FGDs added by saying that;

“cikafu caco ndichekuwayawaya” meaning that even the food they eat is inadequate.

The Village headpersons, Cooperative Chairpersons, MA officials also confirmed that no FISP beneficiaries could claim to be household food secure as a result of inputs under FISP. They revealed that even with the launch of the FISP programme, maize harvests have not improved among the FISP beneficiaries.

4.5 Factors adversely affecting the effectiveness of FISP in promoting household food security

When the respondents were asked to state the factors adversely affecting the effectiveness of FISP in promoting household food security in the area, the respondents from the FGDs and interviews indicated that there were five (5) major factors that affected the effectiveness of FISP in promoting household food security. They identified the following: Inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to pay the required farmer contribution to access inputs, sale of inputs by some beneficiaries. Table 6 on page 36 gives a summary of these factors as identified in the FGDs.

Table 6: Factors adversely affecting the effectiveness of FISP in promoting household food security

Cooperative Name	Focus Group Discussion Participants		Factors adversely affecting effectiveness of FISP
	Male	Female	
Munsanja Farmers Association	7	0	Inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to pay the required farmer contribution to access inputs, sale of inputs by some beneficiaries
Chiawa Multi-Purpose Cooperative	0	7	Inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to pay the required farmer contribution to access inputs, sale of inputs by some beneficiaries
Chimusambo - Mugurameno Multi-Purpose Cooperative Society Limited	7	0	Inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to pay the required farmer contribution to access inputs, sale of inputs by some beneficiaries

4.5.1 Inadequacy of inputs

All the forty two (42) beneficiaries of FISP both in field interviews and FGDs expressed concern that inputs under FISP are inadequate to cover their fields. They revealed that FISP pack was inadequate to cover their fields that are relatively large. One respondent from the focus group discussion had this to say:

“Sometimes the FISP pack was not adequate because of re-planting (locally known as Kujarulura) which is usually necessitated by erratic rainfall and wild animals.”

The beneficiaries in all the FGDs proposed that the government should consider increasing the quantities as this would make the programme become even more effective in promoting household food security. One of the women in the FGDs explained that she had a big family of 14 members and a big field. She proposed that:

“The input pack should be increased to 50kg x 6 basal fertiliser and 50kg x 6 top fertiliser and 10kg x 3maize seed if the programme was to make an impact of food security.”

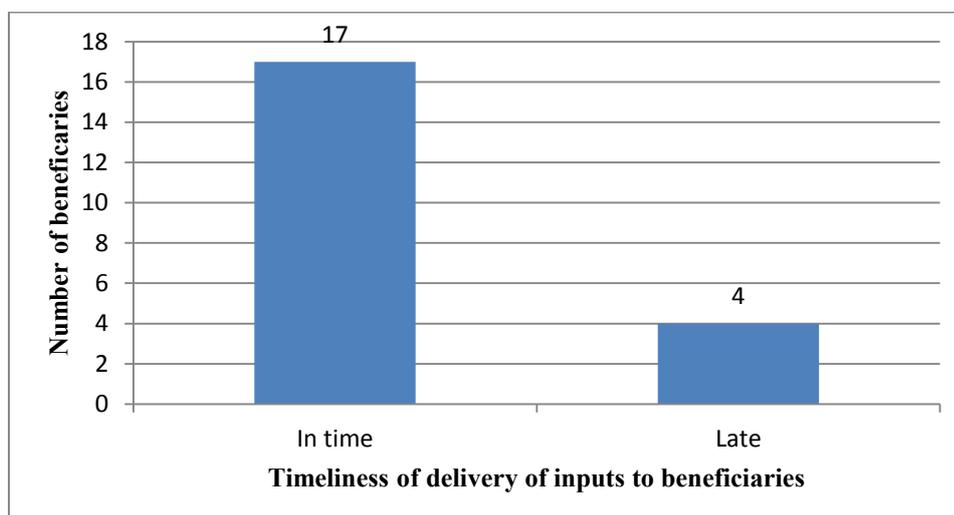
Furthermore, all the three (3) of the headmen interviewed indicated that inputs are inadequate for the majority of the beneficiaries considering the fact that the average size of the households in their villages was six members.

4.5.2 Late delivery of inputs

Almost all the FISP beneficiaries (38) said that they had been receiving the inputs in good time before the onset of rainy season. They observed that usually the inputs were received in November and December. However, four (4) of the beneficiaries interviewed argued that there had been times when the inputs had been received very late. Two (2) of them pointed out that in 2009/10 season, they received their inputs late although they could not specify the month when they received them. One of them said that in 2010/11 agricultural season he received his inputs in January which was late. The fourth was the chairperson of one of the cooperative who also revealed that in 2010/11 they received the inputs in November as a result, they planted late. The participants in FGDs argued that inputs were supposed to be delivered in time in order reduce anxiety among the farmers as they were not sure when the inputs were delivered. Besides that, they also argued that early delivery of inputs would give them enough time to plan on how they cultivate their field. They contended that it was important to deliver inputs in time to enable them plant early (*kupalira*) as rainfall pattern in the area was not predictable. They observed that failure to do that would render the programme irrelevant. Figure three (3) shows the responses on the delivery of FISP inputs. As can be seen from figure three (3), seventeen (17)

beneficiaries indicated that the inputs came on time whereas four (4) beneficiaries indicated that the inputs came late.

Figure 3: Responses on delivery time of inputs



4.5.3 Limited choice of seed varieties

When asked about the variety of seed input they received, all the respondents indicated that they only received maize. However, there were other beneficiaries who wanted the FISP to include other crops other than maize. This was despite other respondents being comfortable with maize seed. Five (5) of the beneficiaries interviewed argued that one of the ways of making the programme more effective in promoting household food security was by including other varieties of seed in the pack such as beans, groundnuts, sorghum and millet. Of the five (5) respondents who proposed other types of seeds, three (3) proposed beans (locally known as *nyemba*) and groundnuts while two proposed sorghum and millet. One beneficiary suggested that:

“It would be good if the pack included drought resistant crops such as sorghum and millet.”

In spite of the sorghum and millet being drought resistant, one official from the MA argued that most of the people in the area including FISP beneficiaries were not willing to grow them because of different reasons. For instance, he pointed out that most people are reluctant to grow them because they are labour intensive in terms of processing them before they are ready for consumption while others said that they were susceptible to elephants and birds “*eating*” them. They also pointed out that “sadza” (nsima) made from millet or sorghum does not taste well compared to sadza made from maize mealie meal.

4.5.4 Lack of funds to pay the required farmer contribution to access inputs

The issue of lack of funds to pay the required farmer contribution to access inputs came out so strong in the FGDs. Some cooperative members said that they had not been accessing the inputs because they were unable to raise some money to pay the required farmer contribution to access inputs due to high levels of poverty. And according to one of the Chairperson of the Cooperatives, he said that during 2011/12 agricultural season some cooperative members could not manage to raise the individual farmer contribution required to access the inputs. As a result of this, some had to combine their financial resources with either their fellow cooperative member or non-cooperative to raise the required contribution in order to access the inputs. After accessing the inputs they then shared them. They felt that the price for the pack was expensive for them and should that be reduced. However, those beneficiaries that managed to buy said the price was fair.

4.5.5 Sale of inputs by some FISP beneficiaries

With respect to the sale of FISP inputs, the study revealed that there were farmers who sell fertiliser under FISP for various reasons. This was revealed by five (5)

beneficiaries sampled and confirmed by one MA official though he could not disclose any statistics. He said that all he knew was that some cooperative members were in habit of selling fertiliser because of high levels of poverty. Furthermore, he explained that some sell the inputs in order to buy food while others sell because they have lost hope in farming especially in Chiawa Central VAG. According to the MA official:

“Some farmers think that if they apply the inputs in the fields they will end up losing their money because the crops will be adversely affected by droughts, floods and destroyed by wild animals as a result they end up selling the inputs to earn money to buy food”.

Furthermore, some beneficiaries revealed that some farmers decided to sale the fertiliser because they believe that their fields especially those along the river banks are naturally fertile and that application of fertilisers would just destroy the soil fertility.

4.6 Summary

This chapter has presented the research findings of this study. The study revealed that FISP beneficiaries were allocated one pack of inputs every year. The study also established that FISP had not resulted into household food security are among the beneficiaries. Five (5) factors that adversely affect the effectiveness of FISP were also identified in the study and these are: Inadequacy of seeds and fertiliser, late delivery of inputs, limited seed varieties, lack of funds by some beneficiaries to contribute towards the purchase of inputs, sale of inputs by some beneficiaries. The next chapter is a discussion of research findings.

CHAPTER FIVE

DISCUSSION OF RESEARCH FINDINGS

5.1 Overview

This chapter presents the discussion of the findings presented in the previous chapter. The findings are discussed in relation to the research questions and the existing knowledge in the field of agricultural input subsidies and food security. In this chapter, effort has been made to reflect, confirm and extend current knowledge and thinking in agricultural input subsidy and food security. This has helped to interpret and outline what the findings meant to this study.

5.2 Inputs received by each FISP beneficiary

From the findings, the study revealed that since the launch of the programme in 2009 the VAGs sampled have been receiving a total of one hundred (100) FISP packs each year and that each beneficiary was entitled to one pack. Each pack consisted of 50kg x 2 of basal fertiliser, 50kg x 2 of top fertiliser and 10kg of white maize seed. Despite some respondents indicating that the inputs were enough, some argued that these inputs were inadequate for them considering the size of their fields and households. These findings were not in line with Mukuka and Abdulai (n.d) who observed that at national level, beneficiaries of FISP who cultivate larger areas received significantly more subsidised fertiliser than beneficiaries who cultivate smaller areas. According to Mukuka and Abdulai (n.d) FISP beneficiaries cultivating less than 2 hectares received an average of 3 to 4 (50kg bags) of FISP fertiliser, whereas beneficiaries who cultivating 2-4.99 hectares received 6 bags on average. Those who cultivated over 10 hectares receive a whopping 15 bags on average. Households who cultivated more than 2 hectares received much more than this, either because multiple household members were involved in FISP or because the

single household FISP participant managed to get more than 4 bags. This is contrary to FISP guidelines which stipulated that all FISP recipients were supposed to receive 50kg x 4 bags of fertiliser and 10kg of maize seed.

Essentially, it is expected that the bigger the farm size, the higher the crop yield and that the opposite may be true. Therefore, there is a positive effect on the quantity of subsidised inputs received and the total maize yield, however, not be that straightforward. On the other hand, receiving of subsidised inputs may create a dependence syndrome among the recipient farmers and this have a negative relationship. And on the other hand, receipt of subsidised inputs may provide additional capital which the household may not have had, thereby producing the crop that the household could otherwise not have produced. In both cases it is assumed that there is a strong relationship regarding maize seed and fertiliser subsidy to the household's increased food security. Seed and fertiliser subsidies correlates very strongly with higher maize yields and hence, the larger the quantity of subsidised inputs the farmer receives, the higher the maize yields.

5.3 Household food security as a result of FISP

The assessment revealed that in spite of the inputs that they receive under FISP no one could claim that he or her has access to enough food as a result of FISP. Essentially, the findings had established that none of the beneficiaries of FISP in the area became household food secure as a result of the programme. The failure of this programme to translate into availability and later on accessibility of enough food by beneficiaries could be attributed to the fact that the beneficiaries of this programme did not receive adequate inputs. However, according to the data obtained from MA officials, Cooperative Chairpersons and FGDs, FISP had not contributed into

household food security among the beneficiaries because various factors that have been identified in table 2. Apart from these factors, the study established that there were other confounding factors that had contributed to household food insecurity in the area such as drought, flood and destruction of crops by wild animals. For instance, all the key respondents in this study revealed that in 2009/10 agricultural season when the programme was launched in the area FISP beneficiaries had grown a lot maize but unfortunately their fields along the Zambezi River where they had planted were submerged by floods that were induced by opening of Kariba dam spill gates. According to a respondent from one of the FDGs it was clear that even with FISP in the area, crop yields have remained very poor. It is therefore very clear that the area contributed to Zambia failing to meet the Millennium Development Goal number one if the situation is not corrected before 2015. The goal was aimed at eradicating extreme poverty and hunger. This goal was closely related to the concept of food security (GRZ and UN 2005).

The findings of the current studies regarding household food security are line with the previous studies that were conducted in Chiawa by Bond. According to Bond and Ndubani as cited in Bond (1993) Nzara (hunger) is always expected Chiawa during January, February, and March, with a shortage of relish (a dish made from vegetables, fish or meat which accompanies the staple food), maize and sorghum as households wait for their crops to ripen. According to Bond, one of the clinical officer at one of the Rural Health Centre estimated that three quarters of children in Chiawa are underweight, an indication of food insecurity in the area. Contrary to the findings on this objective, a study by Policy Monitoring and Research Centre (PMRC) (2015) in the entire Zambia observed that despite the increase in allocation

to FISP, the intended target groups of the programme were not benefiting from it; in contrast only 56% of small-scale farmers were receiving FISP fertiliser. In 2011, 78% of the total amount of maize bought by the Food Reserve Agency was from large-scale farmers whose cultivated land ranged from 2 to 20 hectares. This reveals that the Agriculture Poverty Reduction Program (APRP) is benefiting households that are well off at the expense of the poor. Consequently, in 2016, government of Zambia declared FISP a failed project because most farmers for whom it was intended turned the programme into a social cash transfer hence its failure to meet its original objectives. Speaking in Parliament, Agriculture Minister, observed that:

“The FISP programme has become a failed project and government is seriously relooking at the programme. Last year, more than 7000 ghost farmers were removed from the FISP list which had seen government pay a lot of money to non-existent farmers. FISP was supposed to turn farmers into business ventures so that the beneficiaries could graduate to commercial farmers and be weaned off the programme. But as it turns out, the beneficiaries have turned the programme into the social cash transfer to which people continue to return.” (Daily Nation, 2016).

5.4 Adverse factors affecting the effectiveness of FISP in promoting household food security

The five (5) factors that affect the effectiveness of FISP are discussed below:

5.4.1 Inadequacy of inputs

The study revealed that since the launch of the programme in 2009 the study areas have been receiving a total of 100 FISP packs each year. Each pack consisted of 50kg x 2 of basal fertiliser, 50kg x 2 of top fertiliser and 10kg of white maize seed. However, the quantities of the inputs were not adequate for majority of the

respondents. This was because the maize seeds were not enough to cover their fields especially that most of time they had to re-plant because of erratic rainfall and destruction by wild animals. The programme should have taken into consideration such factors when allocating inputs. Also what was noted was that some beneficiaries had big fields that required more inputs than what was allocated to each beneficiary. Besides that, the research established that on average each family has 7 members. Therefore, the study recommended that inputs should be increased if the programme was to make a significant impact on food security.

5.4.2 Limited choice of seed varieties

The study established that the pack should include not any other variety of maize but early maturity and not the medium type which was distributed in 2010/11 agricultural season. This argument was valid in the sense that the area was drought prone and that rain season was short. It is also inevitable to suggest that the pack should contain a variety of seeds such as maize, sorghum and millet. They argued that in case there is inadequate rainfall then sorghum and millet might do well as they are drought tolerant. This argument was also supported by one of the headmen who revealed that he was planning to plant sorghum next season. In spite of knowing that sorghum and millet are good substitute for maize and that they are drought tolerant majority of respondents said they would want sorghum and millets to be part of FISP. This is because *nsima* made from sorghum and millet does not taste good and also because they are susceptible to birds and elephants destruction. Others argued they take long to mature and involves a lot of labour to process them from the field until they made into mealie meal. On part of the MA, this is a paradox because on one hand they encourage farmers to plant drought tolerant crops through extension services while on the other hand the government was promoting maize

production which is drought intolerant through FISP. In support of this view by some respondents Muleba (2008) asserts that the wrong procedural aspect is that the fertiliser and seeds provided by government is decided by the provincial and district leadership in the Ministry of Agriculture and not by farmers. He contends that a *'one size fit all'* approach to fertiliser and seed regardless of differences in agro-ecological zones and soil types has been responsible for poor yields per hectare experienced each year. "All farmers are made to plant the same variety or range of seeds (short maturing or medium maturing or long maturing) using same type of fertilisers (D-compound and Urea) despite agriculturists knowing that differences in soil fertility require adjustments in input applications. This has resulted in significant drop in yield against yield potentials to as low as 10 bags per hectare against the potential 50-70 bags."

Unlike government's approach, Mweene's study (2006:86,122) revealed that WVZ's approach was different because it encouraged agricultural production of both maize and sorghum (a drought tolerant crop) by distributing out both maize and sorghum seeds to small scale farmers. Mweene observed that the intervention was envisioned to contribute to household food security as a response to food shortage that the area has been facing since early 1980s.

5.4.3 Late delivery of inputs

The study established that the FISP inputs came late. One of the beneficiaries said that their cooperative leaders started collecting money for inputs as late as October. Consequently, the inputs came very late and planting was late too. The other respondent revealed that in 2011/12 he received his pack in January which was very late as rainfall had already started. They argued is that it was necessary to have the packs on time to enable farmers start planning for the season as well as to reduce

anxiety as they don't know exactly when the inputs are supposed to be delivered. Clearly, such delays have potential of adversely affecting the effectiveness of FISP.

Otherwise the majority of the respondents said that their cooperative usually receive inputs in good time before it starts raining. They revealed usually it starts raining *seriously* in late November to December and sometimes in January. The study established FISP inputs usually arrive either in October or November. According to the majority (17 beneficiaries) of the respondents FISP inputs usually arrive in good time and also distributed in good time before it starts raining. And this was in agreement with what one official from MA said in a separate interview.

On the contrary, World Bank sponsored study (2010) 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 (Reichhuber, *et al*, 2010: viii). 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 in Mazabuka and Monze (2011) and Kalomo, Mumbwa and Mpika (2005). The reports revealed that there was late distribution of FISP inputs in both cases. In Monze, for instance, the respondents expressed concern that sometimes inputs are delivered very late in the farming season. They revealed in some situations the inputs have been delivered as late as January, February or March. Some respondents attributed late delivery of inputs to corruption at the distribution centres. The possible reason for this discrepancy is that rainfall in Chiawa starts late such that even if the inputs are delivered in early November they are said to be not late

because the rains would have not yet started raining seriously. But for other places such as Mumbwa and Mpika if inputs are delivered in November they are late because the rains would have started already normally. This could be the main reason why majority of Chiawa farmers said the inputs are delivered in good time.

Similar findings have also been reported in other African countries. For example, a recent study of fertiliser transport subsidies in Tanzania reported that fertiliser arrived late in almost all regions visited by the study team. Late arrival and application of fertiliser were also noted in the 2006/07 input subsidy program in Malawi (Minde, 2008; Dorward et al., 2008; MOAFC, 2007 as quoted in Minde, 2008:7).

5.4.4 Lack of funds to pay the required farmer contribution to access inputs

The study revealed that some individual cooperative members were finding it very difficult to raise money to pay for the subsidised inputs. As a result of this, some individual members did not benefit from the programme. Further, the study revealed that none cooperative members were using cooperative members that could not afford to pay farmer contribution fund to access the inputs. Respondents in FGDs and traditional leaders suggested that government should consider subsidising the inputs further to enable the majority of the people in the area access the inputs. When one of the MA official was asked why there were few beneficiaries in the area. He said it was because of high poverty levels and also because some people have lost hope in farming because of droughts, wild animals and floods. Furthermore, the MA official revealed that few cooperative members would want to make business out of the programme by selling their acquired inputs secretly. The MA official said that a lot of people would want to get the inputs but they can't afford to raise the upfront

payment because of poverty. In 2011/12 agricultural season the upfront payment was at K250 000 plus K30 000 for logistics. Similar observations were also made in a study made in Mazabuka and Monze districts by CSPR. According to the study some cooperative members were finding it difficult to raise the required farmer contribution. According to Agriculture Minister (Daily Nation, 2016):

“The FISP programme was supposed to help farmers with potential to grow but as turns out, it has stopped making any economic sense as shown by the fact that some farmers who are beneficiaries are still failing to raise the K400 deposit fees to access inputs.”

Consequently, some farmers who belonged to cooperatives but failed to raise the upfront payment had to put money together to raise the necessary funds, and then share the inputs. On the other hand some farmers who required more inputs than what was provided for under the FISP had to source extra inputs elsewhere (CSPR, 2011:12).

5.4.5 Sale of inputs by some beneficiaries

The study revealed that there are some farmers who sell fertiliser under FISP for various reasons. According to the CEO some farmers are fond of selling the inputs because of poverty. He disclosed that some sell the inputs in order to buy food while others have lost hope in farming. This is because think that if they apply the inputs in the fields they will end up losing their money because the crops will be adversely affected by droughts, floods and destroyed by wild animals. Furthermore, the research revealed that some farmers decided to sale the fertiliser because they believe that fields along the river banks are naturally fertile and that application of fertilisers would destroy the soil fertility. However, none of the beneficiaries including traditional leaders could confirm such allegations.

In 2008, President Mwanawasa warned against illegal sale of FSP fertiliser either to local traders or smuggling it into Malawi by some cooperative leaders in Eastern province. He warned that he would scrap the 40% discount and only subsidise 5% to benefit all farmers across the country as opposed to a situation where only few people were benefitting. And this was justified by complaints by members of Kazumile Farmers Club located in Senior Chief Ndzamane's area in Chipata. They complained that despite paying for 30 packs of fertiliser (240 bags) that season, they had only received 10 packs (80 bags) (Lungu 2008 and Musonda, 2008). 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.

Furthermore, the Daily Mail also confirmed that Chief Siachitema of Kalomo confirmed that some of his subjects were re-selling the fertiliser under FSP at the point of collection. He called for audit to determine how many farmers had applied the fertiliser and that stern action should be taken against his subjects who were selling fertiliser (Daily Mail, 2008).

5.5 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 quantities of inputs that each beneficiary receives each year. It further went on to discuss the state of household food security as a result of FISP. The last section discussed the factors that adversely affect the effectiveness of FISP in promoting household food security. The next chapter presents the overall conclusion of the

study. It further provides recommendations and suggestions for further research based the findings of this research.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Overview

This chapter is divided into two sections: conclusion and recommendations. It begins by concluding the study and then giving recommendations to the study.

6.2 Conclusion

The findings from this research have revealed that FISP has not resulted into the beneficiaries being household food secure in Chiawa. This is because of various factors that adversely affect the effectiveness of the programme. The study established that inputs that were being supplied to farmers under FISP were inadequacy. 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 were affected effectiveness of FISP and these were: 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. The conclusion of this study therefore is that FISP is not effective and therefore has not resulted into household food security in Chiawa. Based on this, the study made some recommendations aimed at improving the effectiveness of FISP in promoting household food security in Chiawa.

6.3 Recommendations

FISP has the potential of effectively contributing to food security in the area if the following recommendations can be implemented;

1. The government should consider subsidising the Pack further to enable majority of farmers' access it. This is because some eligible farmers cannot access the inputs due to lack of money.
2. Mechanisms to ensure that input supply delivery is done at the right time should be put in place. This will reduce anxiety by some farmers and also give them enough time to plan on how they will cultivate.
3. Since the area is drought prone the ministry should consider including drought tolerant seed crops such as sorghum in the FISP not just maize alone.
4. The government should consider allocating more inputs (packs) in the area so that many small scale farmers can benefit. Further, the government should consider increasing the quantity of the inputs provided under FISP per farmer.
5. There is need for ministry of agriculture and other stakeholders to educate farmers not to sale the inputs when provided but apply them in their fields to promote their household food security.

6.3 Suggestion for Future Research

Since this study focused primarily on assessing the effectiveness of FISP in promoting household food security among the beneficiaries in Chiawa there is need in future to conduct a study on how FISP can be redesigned to contribute effectively to household food security in Chiawa. It is the researcher's view that such a study would contribute positively towards achieving household food security.

6.4 Summary

This chapter has presented the conclusion of the study based on the three (3) specific objectives of this study. Recommendations have also been directed to the MA as an implementing ministry. The recommendations have been derived from what the study has established. Finally, the study has made a suggestion for future research.

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APPENDIX 1: Questionnaire

THE UNIVERSITY OF ZAMBIA
DIRECTOARTE OF RESEARCH AND GRADUATE STUDIES
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
DEPARTMENT OF DEVELOPMENT STUDIES

TOPIC: The Effectiveness of Farmer Input Support Programme in Promoting Household Food Security: The Case of Chiawa, Kafue District.

Dear Respondent,

My Name is Allan Magasu. I am a student studying for Masters of Arts Degree Programme in Development Studies at the University of Zambia and this interview is part of the process of generating data for my dissertation. The information I will get from you is purely for academic purposes and will not be used for other reasons. As we progress in the interview I will be asking some questions, in certain cases I will be providing you with some multi-answers from which you will indicate which is correct for you and then I will be ticking them. Where you will need to give some explanation I will ask you to do so and then I shall be taking notes as you explain so that I can refer back to them when I start writing my dissertation. I will appreciate your comments and or responses on all the issues I wish to know about but I case there are areas on which you feel uncomfortable to comment or respond, kindly feel free to indicate to so and we shall proceed to other issues.

Thank you.

Date of Interview:.....

Name of Interviewer:.....

INSTRUCTIONS

Please answer the following questions as truthfully as possible.

SECTIONS A: BACKGROUND INFORMATION

1. Gender

- i. Male []
- ii. Female []

2. What is your age?

- i. Below 20 years ii. 20 to 30 years
- iii. 31 to 40 years iv. 41 to 50 years
- iv. Above 50 years

3. What is your current marital Status?

- i. Single [] ii. Married []
- iii. Separated [] iv. Divorced []
- v. Widowed []

4. What is the highest level of education that you attained?

- i. Primary [] ii. Junior Secondary School (Grade 8-9) []
- iii. Senior Secondary School (Grade 10-12) [] iv. Tertiary Education []

SECTION B: EFFECTIVENESS OF FISP

1. How many times have you benefited from Farmer Input Support Programme?

- i. 1 time [] ii. 2 times []
iii. 3 times [] iv. More than 3 times []

2. What inputs have you benefited from Farmer Input Support Programme?

.....

3. What are the quantities of inputs that you received?

.....

.....

4. From the time you received the inputs from Farmer Input Support Programme have you been having enough food together with your households?

- i. Yes [] ii. No []

5. From the time you started receiving the inputs from Farmer Input Support Programme how many meals have you been having in a day?

- i. Most of the time once [] ii. Most of the time twice []
iii. Most of the time three times iv. Most of the time more than four times []

7. If your answer to question 7 is “Yes” would you attribute to your having enough food to Farmer Input Support Programme?

- i. Yes [] ii. No

APPENDIX 2: Interview Guide with Ministry of Agriculture

Thank you for having agreed to take this interview. My Name is Allan Magasu. I am a student studying for Masters of Arts Degree Programme in Development Studies at the University of Zambia and this interview is part of the process of generating data for my dissertation. The information I will get from you is purely for academic purposes and will not be used for other reasons. As we progress in the interview I will be asking some questions, in certain cases I will be providing you with some multi-answers from which you will indicate which is correct for you and then I will be ticking them. Where you will need to give some explanation I will ask you to do so and then I shall be taking notes as you explain so that I can refer back to them when I start writing my dissertation. I will appreciate your comments and or responses on all the issues I wish to know about but I case there are areas on which you feel uncomfortable to comment or respond, kindly feel free to indicate to so and we shall proceed to other issues.

Questions:

1. When did the programme (FISP) begin in Chiawa Central?
2. What inputs have you been distributing under FISP?
3. What are the quantities of inputs that have been allocated to each beneficiary in Chiawa Central?
4. From the time the programme begun how has been household food security for the beneficiaries?
5. What are the factors that affect the effectiveness of FISP in promoting household food security?
6. What do you think should be done to improve the effectiveness of FISP in promoting household food security?

APPENDIX 3: Interview Guide with Traditional Leaders

Brief Introduction

Thank you for having agreed to take this interview. My Name is Allan Magasu. I am a student studying for Masters of Arts Degree Programme in Development Studies at the University of Zambia and this interview is part of the process of generating data for my dissertation. The information I will get from you is purely for academic purposes and will not be used for other reasons. As we progress in the interview I will be asking some questions, in certain cases I will be providing you with some multi-answers from which you will indicate which is correct for you and then I will be ticking them. Where you will need to give some explanation I will ask you to do so and then I shall be taking notes as you explain so that I can refer back to them when I start writing my dissertation. I will appreciate your comments and or responses on all the issues I wish to know about but I case there are areas on which you feel uncomfortable to comment or respond, kindly feel free to indicate to so and we shall proceed to other issues.

Questions:

1. When did the programme (FISP) begin in Chiawa Central?
2. What inputs have they been distributing under FISP?
3. What are the quantities of inputs that have been allocated to each beneficiary in Chiawa Central?
4. From the time the programme begun how has been household food security for the beneficiaries?
5. What are the factors that affect the effectiveness of FISP in promoting household food security?
6. What do you think should be done to improve the effectiveness of FISP in promoting household food security?

APPENDIX 4: Interview Guide with Focus Group Discussions

Brief Introduction

Thank you for having agreed to take this interview. My Name is Allan Magasu. I am a student studying for Masters of Arts Degree Programme in Development Studies at the University of Zambia and this interview is part of the process of generating data for my dissertation. The information I will get from you is purely for academic purposes and will not be used for other reasons. As we progress in the interview I will be asking some questions, in certain cases I will be providing you with some multi-answers from which you will indicate which is correct for you and then I will be ticking them. Where you will need to give some explanation I will ask you to do so and then I shall be taking notes as you explain so that I can refer back to them when I start writing my dissertation. I will appreciate your comments and or responses on all the issues I wish to know about but I case there are areas on which you feel uncomfortable to comment or respond, kindly feel free to indicate to so and we shall proceed to other issues.

Questions:

1. When did the programme (FISP) begin in Chiawa Central?
2. What inputs have they been distributing under FISP?
3. What are the quantities of inputs that have been allocated to each beneficiary in Chiawa Central?
4. From the time the programme begun how has been household food security for the beneficiaries?
5. What are the factors that affect the effectiveness of FISP in promoting household food security?
6. What do you think should be done to improve the effectiveness of FISP in promoting household food security?