

**INFLUENCE OF GOVERNMENT'S AGRICULTURAL SUBSIDIES ON  
FOOD SECURITY IN KASIPUL DIVISION; HOMA BAY COUNTY,  
KENYA**

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## DECLARATION

This research project is my original work and has never been presented for the award of any degree in any other university.

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## **DEDICATION**

I dedicate this research project to my very loving parents, Bernard and Josephine, whose motivation has made me make great accomplishment to this stage, the same goes to my beloved husband Paul and my children Laura and Fidel.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ADC</b>	Agricultural Development Corporation
<b>AISP</b>	Agricultural Input Subsidy Programme
<b>ASDS</b>	Agricultural Sector Development Strategy
<b>CIP</b>	Crop Intensification Programme
<b>ESP</b>	Economic Stimulus Programme
<b>GDP</b>	Gross Domestic Product
<b>GIS</b>	Geographic Information System
<b>GOK</b>	Government of Kenya
<b>HIV/AIDS</b>	Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome
<b>KARI</b>	Kenya Agricultural Research Institute
<b>KCSE</b>	Kenya Certificate of Secondary Education
<b>KFA</b>	Kenya Farmers Association
<b>KGS</b>	Kilogram's
<b>KCPE</b>	Kenya Certificate of Primary Education
<b>KSHS</b>	Kenya Shillings
<b>MDGs</b>	Millennium Development Goals
<b>NCPB</b>	National Cereals Produce Board
<b>NGOs</b>	Non Governmental Organizations
<b>TIP</b>	Targeted Input Programme
<b>WB</b>	World Bank
<b>WSSD</b>	World Summit on Sustainable Development

## ABSTRACT

This study examined the influence of government's agricultural subsidies on food security in Kasipul division; Homa bay county, Kenya. A report by United Nations World Summit on Sustainable Development on food security, established that poverty eradication, agriculture and food security have moved to the centre stage of the global development agenda. They are the greatest global challenges facing the world today. They are indispensable requirements for sustainable development, particularly for developing countries, and at the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002, the international community reaffirmed its commitment to develop national and local programmes for sustainable development, poverty eradication and food security (WSSD, 2002). As the Kenya government continues to operationalise the Agricultural Sector Development Strategy (ASDS), Vision 2030 and the National Input Accelerated Programme (NAIP) there is need to address the influence of its subsidy programme on food security. The purpose of the study was therefore to determine the influence of use governments' agricultural subsidies on food security in Kasipul Division. The study sought attain the following objectives which include determining the extent to which time of distribution, training of farmers on the use of subsidy, how access to information of the subsidy programme, how the type and quantity of subsidy and extent to which farm visit and monitoring influence the use of the government's agricultural subsidies on food security. The study adopted a descriptive survey design where qualitative and quantitative data were collected, and targeted all the farmers that benefited under the governments subsidy programme in Kasipul Division, the District Agricultural Officer, Divisional Agricultural Officer and the Extension Officers.

Structured questionnaire and interview schedules were be used to gather information from 6 agricultural office personnel and twenty percent of the target population of 752 which is 150 respondents. The validity of the content was established through judgement whereas reliability was ascertained through test-retest method. The presentation and interpretations was done through the use frequency tables and percentages. The findings showed time of distribution of subsidies, training farmers, access to information and the quality, quantity and type of inputs are the major influences of the use of government's agricultural subsidies in enhancing food security in kasipul division. Others were dependence on rain fed agriculture, inadequate financing and inadequate agricultural personnel. Conclusions and recommendations were then made.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Agricultural sector provides a strong and vibrant socio-economic pillar towards development. Most governments subsidise agricultural sector in order to improve the socio-economic viability of farmers and ensure there is national food security. (Tripp and Longely, 2006). Food security exists when all people, at all times have physical and economic access to sufficient, safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996)

The concept of food security is built on four pillars, the first one is food availability where appropriate food should be physically available consistently in sufficient quantities to the people, second one is food accessibility which implies that households should have sufficient physical, social and economic resources in order to access enough and appropriate food to meet its needs ,the third one is food stability which implies that there should be food supply at all times, either fresh or stored and having adequate food storage capacities or other means of savings for times of crop failure, rising food prices, unemployment and finally ,food utilization where the food should meet the specific dietary and nutritional needs of the individuals. Food security therefore is not the physical availability of a single staple food but a variety of food that is accessible in terms of affordability in adequate quantities containing essential nutrients. (World Food Summit, 1996)

In United States the Government intervention in food and fibre commodity markets began long ago. The classic case of farm subsidy through trade barriers is the English Corn Laws, which for centuries regulated the import and export of grain in Great Britain and Ireland. They were repealed in 1846. At the end of World War I, in 1918 the destructive effects of the war and the surrender burdens enforced on the Central Powers of Europe

bankrupted much of Europe, closing major export markets in the United States and beginning a series of events that would lead to the development of agricultural price and income support policies. United States price and income support, known otherwise as agricultural subsidy, grew out of acute farm income and financial crises, which led to widespread political beliefs that the market system was not adequately rewarding farm people for their agricultural commodities. Modern agricultural subsidy programs in the United States began with the New Deal and the Agricultural Adjustment Act of 1933. With trade barriers already in place for agricultural commodities and everything else, this law gave the government the power to set minimum prices and included government stock acquisition, land idling, and schemes to cut supplies by destroying livestock. (Sumner, 2008)

After several years of experimenting, China introduced its first nationwide direct subsidies for farmers during 2004. Local authorities were urged to ensure that subsidies reached farmers before the 2004 spring crops were sown. Information about the subsidies was widely published in news media to ensure that farmers knew how much they were entitled to receive. Seeds and agricultural machinery also are subsidized under new policies. Subsidies for high-quality seeds, including high-oil soybeans, special-use corn and wheat, and high-quality rice varieties, are paid to seed supply companies, which are expected to pass on the subsidies to farmers. (Gale, Lohmar and Tuan, 2005)

China altered its subsidy program for agricultural production materials in response to the price plunge for chemical fertilizers and diesel oil. According to the new plan, subsidies for each farmer are a function of the fluctuating market prices of agricultural equipment and grain, as well as cultivated land area. They will not be lowered by a fall in the price of equipment, providing an incentive for farmers to grow grain. China launched the subsidy program for agricultural production materials in 2006. The central government made

additional investments several times in 2008 in reaction to surging prices of chemical fertilizers and diesel. (Gao, 2008)

Subsidies for farmers in Africa are a must to be given in order to help them come out of poverty by increasing food production. Most of the developed countries are distributing subsidies amongst their own selves and thus the less developed countries like Africa suffer. Agricultural subsidies in Africa are thereby required to help boost production. Increases in food and fertilizer prices have underlined the vulnerability of poor urban and rural households in many developing countries, especially in Africa, renewing policymakers' focus on the need to increase staple food crop productivity. The implementation in Malawi of a large-scale agricultural input subsidy programme in 2005/6 and subsequent years has attracted significant international interest. While much of this has applauded reported growth in maize production and food security in the country, there have also been significant criticisms and questions. Fertiliser subsidies have been getting a good boost in Malawi as well and the results of the same are for everyone to see and believe. Due to these subsidised fertilisers, the food grain production increased in Malawi which in turn helped Malawi to come out of deprivation and also helped it exporting food grains. These have focussed on the effectiveness and efficiency of the programme in raising maize productivity, its impacts on the development of sustainable commercial input markets, its high and dramatically rising fiscal and macroeconomic costs, its opportunity costs in terms of crowding out of other investments, its overall return on investment, and its sustainability( Dorward, 2009)

There is a silver lining to every dark clouds this is an old saying and Tanzanian farmers the current initiatives by the government to boost and sustain agriculture are good even though in some parts they starve and survive on less than a dollar. Agriculture is the backbone of the Tanzanian economy sharing more than 45 percent in the GDP employing over 80 percent of the population. According to Ministry of Agriculture Food Security and

Cooperatives forecast for food crop production 2008/9 a total of 61 districts in 17 region were identified as hardly hit by drought and needed immediate intervention from the government. Agriculture in Tanzania has been a substantial contributor to over all national growth, its contribution to growth is high even though it is not the fastest growing sector unlike tourism and mineral sectors it has a relatively low share of intermediate inputs in gross value. In the context of globalized market economy Tanzania should strive to turn agriculture into business perspective and capitalize on the climatically disadvantage of its neighbours in the region to become a food basket. A clear long term agricultural economic strategies were needed with an aim to enable farmers to produce for the market a high quality crops that would compete with highly mechanical and heavily subsidized agricultural production methods of the developed nations. Tanzanian government embarked on an initiatives to revive agriculture with a an aim to reduce poverty and scale up agriculture by subsidizing agricultural inputs, seeds and fertilizer to stimulate growth in the needy house hold. (Arumugan , 2011)

The development objective of the Accelerated Food Security Project for Tanzania is to contribute to higher food production and productivity in targeted areas by improving farmers' access to critical agricultural inputs. This expansion in program coverage is critically important in the context of high international fertilizer prices, and rising international grain prices and help maintain self-sufficiency on grain production. Tanzania should opt for cooperatives, improve seeds, supply fertilizers and emphasize small scale irrigation in order to sustain agriculture. Heavy subsidy to agricultural sector would improve livelihood of the poor, generate demand of goods and services in the community and reduce poverty and inequality, support social and political stability to be continuous rather. Proper government initiatives and implementation will develop consistent economic strategy based on potential of the country with consideration to necessities of the people.(Tambwe, 2012)



Agricultural subsidies are provided to farmers in order to increase their outputs, reduce post harvest losses, adopt better technologies and production practices and enhances market links to promote farmers income thereby improving the economic viability of small scale farmers. The achievement of national food security is the key objective of the agricultural sector in Kenya (ASDS, 2009). In Kenya the farming community is overseen by the Kenyan Ministry of Agriculture, which helps facilitate the production of food and agricultural raw materials in order to find ways to advance food security in the country and to make sure farmers are able to earn a living.

The ministry has various corporations that are involved in different aspects of agriculture, including the Agricultural Finance Corporation which finances agricultural programmes, the Kenya Agricultural Research Institute, which researches better agricultural productivity to secure food security in the country and the Kenya Seed Company, which facilitates the supply of high quality seeds to farmers. In 2007 the Kenyan government embarked on a National Accelerated Agricultural Input Programme to promote food security, use of agricultural input and agricultural productivity. The government introduced subsidies at the height at global hike in fertiliser prices which shot from Ksh. 2,500 to Ksh.6,000 for a bag of 50 kg CAN fertilizer (Owuor Hoffler, 2009)

In Kenya the government is selling subsidised fertilizers through National Cereals Produce Board (NCPB) networks.

**Table 1.1: Current prices per 50 kgs bag**

<b>Fertilizer Type</b>	<b>Unit</b>	<b>Subsidised Price (Kshs.)</b>	<b>Market Price (Kshs.)</b>
DAP	50kg	2,500	4,000
CAN	50kg	1,400	2,200

Source: *NCPB, 2012 and KFA, 2012*

Selected Farmers access these free fertilizers and certified seeds through the local agricultural officer at the district, division or location in Kasipul Division, and those not selected are given vouchers to purchase the fertilizers and certified seeds at subsidised prices upon certification by the divisional agricultural officer from local or neighbouring NCPB stores after the officers access the farmers' farm to determine the quantity and type of seeds and fertilizer needed. The farmer is then given a form which he/she presents at the National Cereals Produce Board (NCPB) depots or Agricultural Development Corporation (ADC) stores or Kenya Seed to buy the fertilizer in bags clearly marked "Government of Kenya Fertilizer".

## **1.2 Statement of the problem**

The agricultural sector presents itself as an important element that can contribute to the realisation of the eight Millennium Development Goals (MDGs) because of its innate characteristics. The agricultural sector also contribute to the broader economic goals as envisaged in Vision 2030 anchored on the economic, social and political pillars supported by the foundations of macroeconomic stability, continuity in governance reforms, enhanced equity and wealth creation opportunities for the poor, science, technology, innovation, land reforms, human resource development, security and public sector forms (Vision 2030, 2007)

The Ministry of Agriculture in Kenya released a policy statement on promoting sustainable and competitive agriculture through formulation of agricultural policies aimed at promoting agricultural technology, provision of extension and regulatory services for agricultural development in order to attain food security for all Kenyans. (Ministry of Agriculture, 2008) In view of this the government introduced subsidies to increase farmer's productivity and incomes to enhance food safety. Rachuonyo South District Agricultural Department report during the District Development Committee meeting on the 29<sup>th</sup>

November, 2011, noted that despite the significant contribution of the agricultural subsidies programme to enhance food self sufficiency, food security level is still low since the district experiences food shortage rendering the District to depend on relief food and food imports. The study therefore sought to investigate the influence of government's agricultural subsidies on food security in Kasipul Division.

### **1.3 Purpose of the study**

The purpose of this study was to determine the influence of use governments' agricultural subsidies on food security in Kasipul Division.

### **1.4 Objectives of the study**

The following were the objectives of the study:

- 1) To determine the extent to which time of distribution of subsidies influence food security in Kasipul Division.
- 2) To establish the extent to which training of farmers on the use of subsidies influence food security in Kasipul Division.
- 3) To determine how access to information of the subsidy programme influence food security in Kasipul Division.
- 4) To establish the extent to which provision of farm inputs influence food security in Kasipul Division.

### **1.5 Research questions**

The following were the research questions of the study:

- 1) To what extent does time of distribution of subsidies influence food security in Kasipul Division?

- 2) How does training of farmers on use of the subsidies influence food security in Kasipul Division?
- 3) How does access to information of the subsidy programme influence food security in Kasipul Division?
- 4) To what extent does provision of farm inputs influence food security in Kasipul Division?

### **1.6 Significance of the study**

The use of government's agricultural subsidies to farmers can only promote food security when factors influencing self food sufficiency are identified. It is hoped that the findings of the study would provide beneficial information and data for use by the governments Ministry of Agriculture in development of policies aimed at promoting food security through the use of agricultural subsidies.

The study may also help researchers and students interested in similar research topics by providing insights for further investigations in other areas. The study may also instil awareness among the farmers on how government's agricultural subsidies can promote self food sufficiency. The study may help Non Governmental Organizations (NGOs), Donors, development partners and stakeholders in the field of agriculture recognise the need of consultations and planning in order to promote food security and socio economic welfare of the nation.

### **1.7 Limitations of the study**

The study was limited in terms of coverage owing to financial resources available. With onset of the long rains from April 2012 in Kasipul Division, the study coincided with

the unfavourable weather conditions and muddy roads which made it difficult to access certain areas which caused delay in administration of the questionnaires.

The study was conducted within the budget available. The occurrence of these eventualities were mitigated by accessing affected areas by trekking and use of motor cycles to penetrate remote regions with no good road network. The sample size was made manageable but still remained a representative of the target population.

Visits to the field were done during day time between 9.00 a.m. to 2.00 p.m. before rain.

### **1.8 Delimitations of the study**

The study was confined to the influence of governments' agricultural subsidies on food security in Kasipul Division. The study was delimited to West Kasipul, East Kasipul, and Central Kasipul where farming activities take place. Kasipul Division is one of the two divisions in Kasipul Kabondo Constituency located Homabay County with Oyugis as its capital town. Homa Bay county borders Migori, Kisumu, Nyamira and Kisii counties. 2009 population census indicated that Kasipul Kabondo Constituency had a population of 220,666 spread over an area of 507 Km<sup>2</sup>. It is inhabited by Luo, Luhya and Kisii communities with the exception of Oyugis town which is inhabited by many tribes since it is a cosmopolitan town. The constituency lies in the upland plateau with an altitude ranging between 1,350m and 1,700m above the sea level with temperatures between 14<sup>c</sup> and 20<sup>c</sup>. The economic main stay of Kasipul Kabondo Constituency include, fish farming using ponds and additional ponds promoted by the Economic Stimulus Programme, iron ore mining in God Nyango, livestock farming, maize farming, coffee farming , tea farming, sweet potatoes farming and ground nuts farming.

## **1.9 Basic assumptions of the study**

The study was carried out on the basis of the following assumptions; the study assumed that all the farmers would provide honest and accurate information in order to determine the discrepancy between the actual and expected level of food security.

It was assumed that a sample of 20% would be a representative of the entire target population.

## **1.10 Definition of significant terms as used in the study**

**Time of distribution** : Is the planting period when the Government's Agricultural Subsidies are disbursed to the farmers.

**Training** : Is an educational and learning process that involves acquisition of knowledge, concepts, rules and new information, changing of attitude, re-learning and reinforcement of existing knowledge and skills.

**Access to information:** Access to information is the obligation to publish and disseminate to the public key information and the obligation to receive from the public requests for information and to respond.

**Provision of farm inputs:** This is the distribution of resources that are used in farm production, such as fertilizer and seeds.

**Small holder farmer** : Natural persons dependent on small-scale subsistence farming as their primary source of income and cultivate less than 2.0 hectare of land. FAO (2001)

**Food security** : A situation where all people at all times have physical and economic access to sufficient, safe, nutritious food that meet their dietary needs and food preferences for an active and healthy life.

**Government's Agricultural Subsidies:** Government free supplied input subsidies of CAN fertilizer, DAP fertilizer, certified maize seeds and subsidised NCPB fertilizer vouchers.

**Programme** : A plan of action aimed at accomplishing a clear objective, with details on what work is to be done, by whom, when and resources to be used.

**Certified seeds** : A type of seed that is produced under strict certification standards in order to maintain varietal purity, has pass field inspection, conditioned by an approved seed conditioning plant, sampled, and passed lab testing before it can be marked and sold as certified.

**Soil pH** : Soil pH is a measurement of the alkalinity or acidity of soil. pH is measured on a scale of 1-14, with 7 as the neutral mark, anything below 7 considered acidic soil and anything above 7 considered alkaline soil.

**CAN fertilizer** : CAN stands for Calcium Ammonium Nitrate, a type of fertilizer rich in nitrogen used for top dressing.

**DAP fertilizer** : DAP stands for diammonium phosphate, a type of fertilizer with a high phosphorous content used during planting.

### **1.11 Organization of the study**

This research project was organized in five chapters. Chapter one covered the introduction, statement of the problem, objectives, research questions, research hypothesis, significance, limitations, delimitations, scope, basic assumptions and significant terms used in the study. The second chapter reviewed the literature related to the study. Chapter three detailed the methodology of the study. This included the research design that was adopted,

targeted population, source of data, sample and sampling design, the research instruments, data collection procedures and data processing and data analysis technologies. Chapter four covered a detailed analysis and interpretation of research findings, and finally chapter five gives a summary and conclusions of the study, the same chapter also presents recommendations and suggestions for further research based on the research findings.





## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter critically reviewed the available relevant related literature to my area of study of the influence of government's agricultural subsidies on food security. The literature reviewed scholarly work done in Rachuonyo South District, Kasipul Division and related findings across the world.

This chapter related the variables through the conceptual framework and review literature on the following thematic areas: influence of time of distribution of the agricultural subsidies on food security, influence of training of farmers on the use of the agricultural subsidies on food security, influence of access to information of the subsidy programme on food security and influence of provision of farm inputs on food security. It showed how the independent variables influence the dependent variables and demonstrate the possibility of moderating, intervening and extraneous variable in influencing the outcome of the study.

Kenya is an agricultural based economy where majority of people derive their livelihood from various forms of agriculture. Different communities practise various types of land use based on their socio economic need and cultural practices which are mainly determined by the weather patterns, soil fertility, ecology and levels of social development. This chapter therefore analysed the theoretical framework and the theories whose features form this study.

#### **2.2 Overview of the Concept of Government's Agricultural Subsidies on Food Security**

According to Thurow, (2010) An agricultural subsidy is a financial assistance to farmers through government sponsored price support programme or agribusiness to

supplement their income, ensuring plentiful food production, manage the supply of agricultural commodities, stabilizing food prices and generally strengthening the agricultural segment of the national economy.

Beginning in the 1930s most industrialized countries developed agricultural price-support policies to reduce the volatility of price for farm products and to increase or at least stabilize farm income. In food exporting countries, such as United States and France agricultural subsidies have been designed primarily to increase farm income, either by raising the long-term level of prices above free market level or by providing direct payments to farmers. In Africa, increase in food and fertilizer prices have impacted greatly on the poor urban and rural households, renewing policy makers focus on the need to increase staple food crop productivity. (Wright, 1995)

A study by the Overseas Development Institute evaluates the benefits of the Malawi Government Agricultural input subsidy programme, which was implemented in 2006/2007 to promote access to and use of fertilizers in both maize and tobacco production to increase agricultural productivity and food security. The subsidy was implemented by means of a coupon system, which could be redeemed by the recipients for fertilizer types at approximately one-third of the normal cash price. According to policy conclusions of the overseas Development Institute the voucher for coupon system can be effective way of rationing and targeting subsidy access to maximize production, economical and social gains. Many practical and political challenges remain in the program design and implementation required to increase efficiency, control costs and limit patronage and fraud. (Dorward, 2008)

### **2.2.1 Influence of Time of Distribution of the Agricultural Subsidies on Food Security.**

Excess rain in fertilized areas cause nutrients to leave the site by way of surface run off or subsurface leaching. Food production impacted by heavy rainfall events lead to

flooding can wipe out entire crops over wide areas and excess water lead to soil water logging and reduce plant growth leading to wastage of seeds and fertilizer used. At the basis of any understanding, weather patterns greatly impacts on agriculture. For example, rates of plant photosynthesis depend on the amount of active radiation and levels of atmospheric carbon dioxide. Water is vital to plant growth, so varying precipitation patterns have a significant impact on agriculture. As over 80% of total agriculture is rain fed, projections of precipitation changes should often influence planting seasons (Olesen & Bindi 2002)

(Iken and Amusa, 2004) Before the start of any agricultural programme aimed at increasing agricultural output, there is need to have a working knowledge of your local climate, and then stock sufficient quantities of inputs at the time farmers need them. Yields decline with lateness of planting and the optimum time of planting is usually at the start of rains. Response of inputs like seeds and fertilizers are dependent upon the planting time. In Nigeria preparation of fields for farming is begin in April or May when the farmers clear shrubs, the government kicks off the subsidy programme in May before the crops are grown during the rainy season which begins in June or July. The best time to apply fertilizer to crops during planting is at the start of rainy season

Rain fed agriculture on which North Rift Valley in Kenya agricultural activities also rest in as well as Kasipul Division, has been the dominant source of moisture for food production. Subsidies like seeds and fertilizers should be distributed to farmers during planting season at the onset of rains. Timely planting using fertilizer allows the germinating seeds to benefit from the nitrogen flux effect which occurs with the first rains. The germinating seeds will also benefit from the warm soil temperature and good aeration thereby escaping pests and diseases which minimise agricultural yield. When subsidies are distributed early, farmers will plant early and harvest early thus allowing land preparation for the next cropping season (Kiiya, Ndung'u, Onyango, Lunzalu and Mulati, 2005)

### **2.2.2 Influence of Training of Farmers on the Use of Agricultural Subsidies on Food Security.**

The government of Kenya recognises that educating and training its citizens is fundamental to the success of the vision 2030 strategy (Vision 2030, 2007). The Vision 2030 relies on the creative talents that can raise the Country's international competitiveness through enhanced productivity at the micro (agribusiness) and national levels. A literate population is an asset to the agricultural sector as it provides qualified personnel & opportunities for developing the sector. According to (Nompozolo, 2000) A knowledge economy creates, adopts and adapts information on production and distribution of goods and services, making it the local point and engine for rapid agricultural growth.

To become an entrepreneur with parameters that determines the scope of an enterprise in rural areas, the small holder farmers must be familiarised with the principles of business economics, record keeping and they should become proficient in managerial skills. Education and training should go hand in hand since education is the primary motivator and initiator. Any agricultural development plan should start with training of the targeted farmers before the support services are provided, and the training should continue through extension support during the project implementation. Farmers should have a greater contact with various sources of relevant information which confirms the importance of knowledge in order to improve farming efficiency. Good performance and reasonable amount of information is necessary to back up agricultural productivity. He also recommends that extension officers must be trained in indigenous knowledge relevant to the farming activities carried out in their working areas.

The role of extension officers actually determines sustainability of the development initiatives in the long run. Thus, when a farmer has a higher level of education the more successful the farmer is. Education mostly improves the managerial ability by helping the

farmer for emulate and execute farm plans, and acquire information on how to improve marketing of the products.

A sound educational background can reinforce natural talent and provide a basis for information decision making. (Oeffle & Koelle, 2003). It is the knowledge that the farmers gain from the extension officers that enable them to be sustainable and successful in the future. Therefore the extension officers become very significant by fully disseminating information between the government and small holder farmers.

Any agricultural development plan should start with appropriate and relevant training of the targeted farmers before the support services are provided. Farmers should have a greater contact with various sources of relevant information which confirms the importance of knowledge in order to improve farming efficiency. Training is enhanced when various medium are used to promote easy understanding, this can be done using appropriate mediums which vary from workshops, seminars, on farm training and demonstrations (Oeffle & Koelle, 2003).

A study conducted by Guo (2008) in China disclosed that the training process is best done when broken down into 5 major steps namely prepare, tell, show, do and review. Prepare the farmer to be at ease and explain why the skill to be learned is important. Explain the content thoroughly by breaking it down into key parts or steps. Demonstrating exactly how the task or skill is to be done by the farmers. Involve the farmers by asking questions and getting feedback. Give the farmer an opportunity to perform or do the task, this is important as it builds confidence in the learner. The trainer should ensure that the farmer does each step correctly to avoid getting wrong concepts. Finally the trainer should review the training process by providing honest feed back to the learner in terms of encouragement, constructive criticism.

According to Nompozolo (2000) noted that in South Africa that good performance and reasonable amount of information is necessary to back up agricultural productivity. He also recommends that extension officers must be trained in indigenous knowledge relevant to the farming activities carried out in their working areas. The role of extension officers actually determines sustainability of the development initiatives in the long run. It is the knowledge that the farmers gain from the extension officers that enable them to be sustainable and successful in the future. Therefore the extension officers become very significant in fully disseminating information between the government and the small holder farmers.

Muok, Kimondo and Atsushi (2001), pointed out that banana farmers in Uganda are trained using farmer to farmers approach, where model farmers are selected based on their education level, leadership position, success at the enterprises and personality traits. The model farmers are trained and given inputs, other farmers are encouraged to learn from the model farmers and the model farmers are required to encourage and train their peers by generously sharing their knowledge. Formation of farmer organizations enables farmers to discuss and share their various experiences which enhance group dynamics.

Jiggins (2007) suggests that before planting seasons farmers should be appraised on the latest crop management techniques, fertilizers requirements and its application strategies to get maximum benefit and output. Training can also be in form of product demonstration, fertilizer demonstrations are laid out at farmer's field to educate and convince the farmers for balance fertilizer use. Another avenue of training farmers is through brochures on fertilizer use which should accompany the fertilizer during distribution. Training is beneficial when it is done where it is exactly needed and should be designed considering the ability of the farmers to learn the material facts, use the facts effectively and make the most efficient use of resources available (Arumugam, 2011).

According to Muyanga (2006) in order for Kenya to promote better services the proximity of extension services can ensure the lowest cost and quality of inputs that are available to farmers. The purpose of demonstrations and training sessions should focus on helping small holders optimise their use of the inputs and training topics should result from identified training needs which will have direct relevance to the needs of trainees and therefore enhance learning by adults such as farmers and extension agents.

In a case study of Bangladesh, Bari (1987) noted that participation of rural people is essential for effective rural development, people cannot participate unless they have been motivated or made aware about changes they need for their welfare. As such regular and repeated training and education play a vital role to make the rural people aware and acts as subjects in the development process.

Muok et.al (2001) pointed out that in Uganda the government privately run extension services as well as non-governmental organizations regularly train banana farmers. Thus when a farmer has been trained effectively and continuously the more success the farmer is. Training improves the managerial ability by helping the farmer to emulate and execute farm plans and also acquire information on how to improve marketing of their products. Hence a sound training background reinforces natural talent and provides a basis for decision making.

According to Ali, Kathuri and Wesonga (2011), in a case study on Effective extension methods for increased food production in Kakamega District in Kenya, training should continue through extension support during the project implementation. Regular training of farmers on subsidies usage like fertilizers enhances their adoption. Field days should also be held at various crop growth stages to show case the effect on balanced fertilizer use.



### **2.2.3 Influence of Access to Information of the Subsidy Programme on Food Security.**

Creating awareness through provision of information product and services to the rural people is an essential component for development. Information has power only when used and applied effectively.

In another review Bigman (2004) asserted that in Rwanda information access is regarded as a basic resource for farmers to improve their food security level as well as their living conditions. Information access facilitates awareness and empowerment as well as access to information on supply of inputs, new technologies, early warning systems (drought, pests, and diseases) and market prices.

Tripp and Longely (2006) suggested that information given to rice farmers in Sri Lanka should be according to their needs, their needs could be how to use fertilizers, plant seeds, control pests and diseases. Since information is power, then enough information should be given to farmers repackaged in the language they will understand and given to them at the appropriate time. Farmers are able to make informed choices on the basis of information availed to them, therefore efforts to create suitable awareness for accessing information is very significant.

In a study carried out in Nigeria by Okafor (2002). She noted that an effective subsidy programme promotion policy is successful when it creates awareness among the farmers of the existence of the subsidies. The policy should analyse the extent to which the farmers are exposed to valuable information regarding the subsidy programme. She noted that extension officers are the main information providers, and are in charge of information centres, hence have a great role to play in providing information to farmers in different formats like talks, posters, pamphlets and brochures.

Nyoro and Muiruri (2001) mention that the FM radio sessions form the basis of content delivery rural farmers. Extension agents and selected farmers from the project area participate

in radio discussions which are broadcasted in national and local FM stations. Recordings of radio broadcast are dubbed on audiocassettes for replay by farmer groups during their meeting days. The participation of extension agents and farmers in agricultural radio programmes has brought access to information closer to the rural small holder farmers thereby demystifying the agricultural programmes.

#### **2.2.4 Influence of Provision of Farm Inputs on Food Security**

A study conducted by Thompson and Troeh (2003) in Lake Tahoe in North America noted that to be most effective, fertilizer need to be applied in proper quantities. Proper fertilizer application will not only improve plant health and growth but it will save money and time, and most importantly help protect the crystal clear beauty of Lake Tahoe. If less or excess fertilizers are supplied to the plants, the nutrients they contain will bypass the plants they are intended for and end up in downstream waters where they will stimulate the growth of other un wanted plants like algae.

(Iken and Amusa ,2004) Application of inputs like fertilizer should not been seen as a goal in isolation. The broader goal is application of sufficient quantity of fertilizer since fertilizers are substances that supply plant nutrient or amend soil fertility and food quality is definitely improved by adequate use of fertilizers. Another consideration for quantity of fertilizer and seeds to be used on a farm, is the size of farm so as to ensure that sufficient quantity of seeds and fertilizer are applied as per the required measures.

### **2.3 Empirical Literature**

Green revolution in Asia was mediated by the facilitation of modern inputs such as improved seeds, fertilizers and pesticides to farmers. With the introduction and adoption of these improved inputs, the farmers were able to substantially increase their crop production

levels by several folds. These increased yields provided food security and stability which in turn sparked off an array of social and economic transformation. (Bezabih E., Hadera G. and Nigatu R., 2010)

In fostering agricultural development and safeguarding food security in China, the Chinese government introduced policy support programme by increased spending in agricultural subsidy from 103 billion Yuan in 2007 to 123 billion Yuan in 2008 .The subsidy for superior varieties covered rice, wheat, corn and cotton. The subsidy for purchasing farm machinery also rose to 13 billion Yuan. In addition to this China further expanded the national grain reserve and provided a strong incentive to major grain producing counties. (Gao, 2008)

The implementation of agricultural subsidy policy in China greatly promoted farmers' income since 1978. Farmer's income grew most rapidly from 1978 to 1984 (Cheng, 2005) China's agricultural subsidy policy mainly involves finance, foreign trade, food, civil affairs, and banks so the transaction cost is high (Guo, Liu, 2004)

Many parts of Africa have a favourable climate and fertile soil, making agriculture well suited to the area, however, the right equipment and expertise is often lacking and food security is not always guaranteed. South Africa's Standard Bank is determined to make food security a sustainable reality in Africa. In 2009 it decided to help all categories of farmers in the countries in which it operates, prioritising those in Ghana, Nigeria, Namibia, Uganda and Zambia. Next it will assist producers in Mozambique and Tanzania (Taylor, 2004)

Malawi's Agricultural Input Subsidy Programme (AISP) turned around the agricultural sector into a success leading to food security for the country and in November, 2008 the United Nations Food and Agricultural Organization rewarded Malawi's President the late Bingu Wa Mutharika, who also served as the Minister of Agriculture with the Agricola prize. (African Focus Bulletin, Jan 2009)

In the 1998/99 and 1999/2000 agricultural seasons, the Malawi Government with donor support, implemented a large scale programme under which all farm household received an input 'starter pack' comprising 15 kg of fertilizer, 2 kg of maize seeds and 2 kg of legume seeds. With good rains, Malawi had large harvests these years. From 2000/2001 the programme was scaled down to the 'Targeted Input Programme' (TIP) with a smaller quantity 10 kg fertilizer per beneficiary and targeted a section of beneficiaries, the national production was very low with severe food shortages in 2001/2002 to 2005/2006. From 2005/2006 the government took a different approach with a very large scale Agricultural Input Subsidy Programme (AISP) by providing fertilizer and seeds to farmers.

Low income farmers were given fertilizers coupons to purchase 100 kg of fertilizer equivalent to US\$7, one fifth of the market price and in addition the farmers were provided with vouchers to buy seeds enough for planting half an acre each. As a result the average yield per farmer increased to 2 tonnes per hectare from 0.8 tonnes in 2005 (Minter, 2009).

In Rwanda agriculture is a major component of its national economy. In 2009, agriculture contributed 34% to the country GDP, about 84% of the population of which 52% are women depends either directly or indirectly on agriculture for living. (Rwanda Statistical Year Book, 2010) With a total population of 1,205,090 and an estimated growth rate of 2.9%, the country has limited availability of arable land for agriculture and the constantly growing food requirements of the growing population renders food security a major challenge. (World Bank Report, 2007)

Cultivation of food crops have been predominantly by smallholder farmers for subsistence living, as a result the on-farm productivity levels have been very low in Rwanda. The low productivity is mainly attributed to low use of inputs which make farmers produce insufficient food to feed their families and with no surplus for future consumption hence have no income to purchase yield enhancing inputs. Increasing agricultural productivity and food

security therefore requires adoption of modern inputs by the small holder farmers. Access to improved inputs was a challenge to farmers due to high purchase and transportation cost to farmers who are mainly based in the rural areas. This prompted the Rwandan Government to introduce a Crop Intensification Programme (CIP) which is being implemented by the Ministry of Agriculture and Animal Resources to attain the goal of increasing agricultural productivity. CIP aims to significantly increase food crop production through a multi-pronged approach which involves facilitation of improved seeds inputs bought from Kenya and Tanzania and fertilizer input, consolidation of land use, provision of extension services and improvement of post harvest handling and storage mechanisms in order to ensure that the country is food secure (Arumugan , 2011)

After revival of the Hola and Bura Irrigation Schemes through the Economic Stimulus Programme (ESP) in 2009 in Kenya , the farmers were given seeds and fertilizer subsidies. This scheme led to high maize output that improved the socio - economic lives of the farmers drastically. However, poor planning by the government in terms of storage led to post harvest losses. fertilizer (Owuor Hoffler, 2009)

## **2.4 Theoretical Framework**

In trying to establish between various factors that influence the use of government subsidies programme on food security, the study adopted the Sustainable Livelihood Approach Theory founded by Robert Chambers and Gordon Conway in 1991. The theory depicts that a livelihood comprises the capabilities, assets (stores, resources, and access) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets and provide sustainable livelihood opportunities for the next generation, and which contributes

net benefits to other livelihoods at the local, national and global levels in the short and long term (Chambers and Conway, 1991)

Sustainable Livelihood Approach Theory concerns peoples strategies and capacities to generate and maintain their means of living and enhance their well being and that of future generations. The concept refers to the institutional arrangements and procedures that have been instituted by various development stakeholders which are contingent upon autonomy, sustainability, productivity, availability, stability and accessibility. All these factors are dependent on five principle assets/ capital which include; natural capital, social capital, physical capital, human capital and economic capital that are important ant for a sustainable livelihood. They are predicated on ownership of resources, equity, knowledge integration, rural development and participatory and wise decision making.

For this study the Government development programme in the agricultural sector of using subsidies to promote food security was examined to determine how ,the time of distribution of the agricultural subsidies ,training of the farmers on the use of the agricultural subsidies, access to information of the subsidy programme and provision of inputs inter related with the main pillars of food security which are availability ,accessibility ,utilization, stability ,sufficiency, safety, quality, sustainability, and reliability.

One important reason for the success of the theory is the winning attention of key policy makers and donor institutions. Since, it offers a fresh vision of a holistic and integrative approach with the capacity to analyse and understand the complexity of rural development. (UNDP, 1999a) The theory entails an elaboration of policy oriented livelihood framework, the description and analysis of driving forces and impacts of all types of activities related to the local livelihood situation.

## **2.5 Conceptual Framework**

Mugenda and Mugenda (2003), conceptual framework involves forming ideas about relationships between variables in the study and showing the relationship graphically. According to Tomp (2005) a conceptual framework is a broad set of ideas and principles taken from relevant inquiry and used to structure subsequent presentations.

In this study the conceptual framework was based on the idea that independent variables which include: time of distribution of the subsidies, training of farmers on the use of subsidies, access to information of the subsidy programme and provision of farm inputs influenced the use of government's agricultural subsidies on food security.

**Figure 2.2: Conceptual framework diagram**

This study was guided by the following relationship between the variables as shown below:

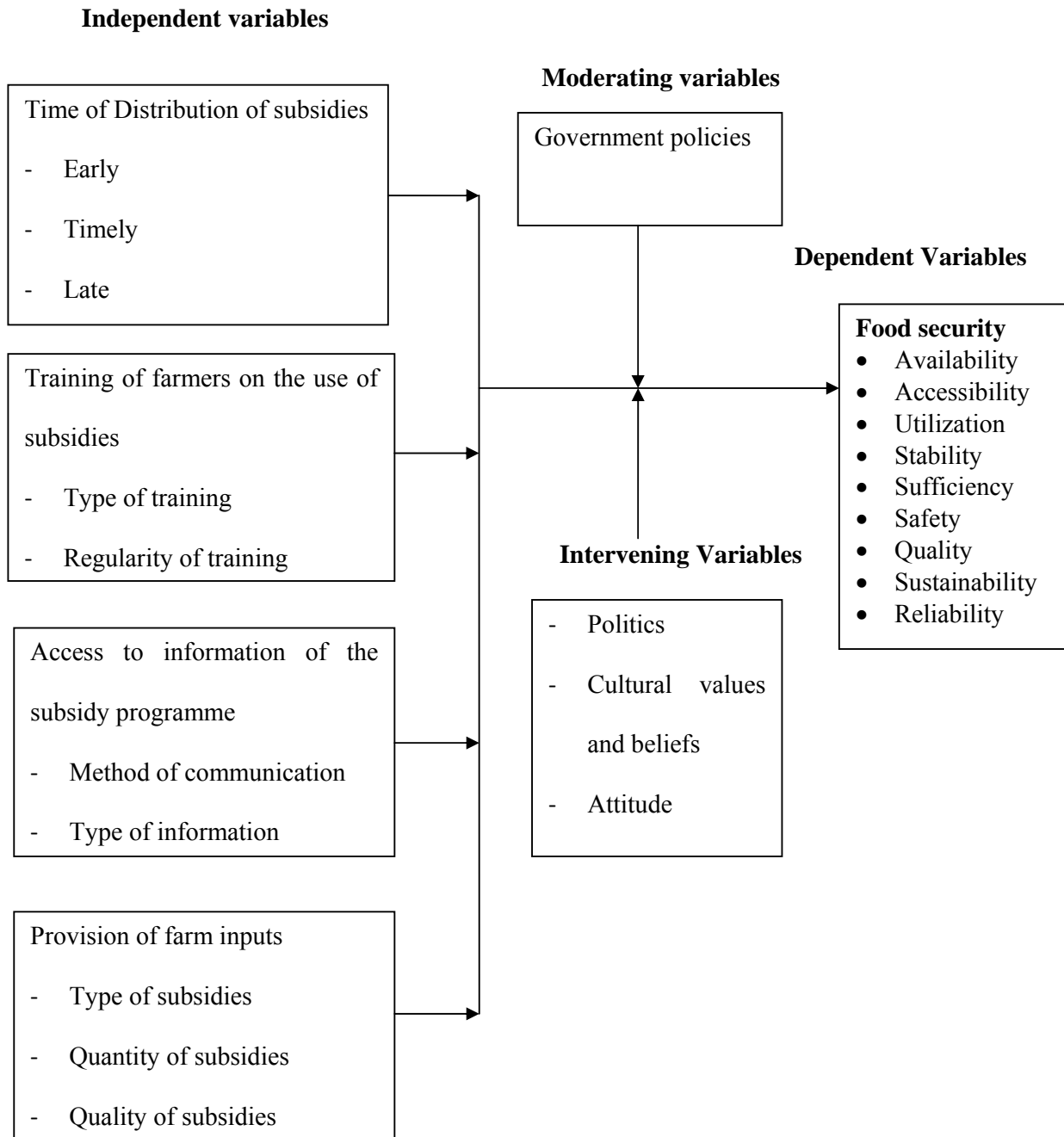




Figure 2.1 shows that time of distribution of the agricultural subsidies, training of farmers on the use of the agricultural subsidies, influence of access to information of the subsidy programme and provision of farm inputs which are the independent variables influence the government's subsidy programme on food security the dependent variable. It is also apparent that planning and execution of the subsidy programme by the government is influenced by the independent, moderating, intervening and dependent variables.

## **2.6 Operationalisation of dependent and independent variables**

Figure 2.2 illustrates the perceived relationship between the variables of the study. From the conceptual framework, time of distribution, training of farmers on the use of subsidy, access to information of the subsidy programme and provision of farm inputs influence the use of government's agricultural subsidies on food security.

Time of distribution influence the use of governments agricultural subsidies on food security since planting season should coincide with the onset of the rains given that water is vital for plant growth, so varying precipitation patterns have a significant impact on agriculture. The important aspects of rainfall to be considered are the amount, duration and intensity. Total rainfall should be adequate, well distributed and reliable to increase the chances of high yields thereby enhancing food availability.

Regular and relevant training on the use of subsidies by the extension officers to the farmers on food production methods and use of subsidies, enables the farmers to select and implement technologies and practices which fit their particular environment and culture. The extension officers should also be adequate in numbers, and qualified in order to offer the required functional content in a meaningful form to the farmers. Quality and safe agricultural output are produced when the inputs are used appropriately as required so as to ensure that the produce are utilisable by the recipient consumers.

Access to information of the subsidy programme enables farmers to be aware of the government programme. This influences increase in the number of the desired recipients thereby promoting increased use of the inputs in order to produce sufficient outputs as per the factors of production. Success of rural development programmes depends on effective use of information in daily activities since the diverse nature of rural communities indicates that their information needs are many and varied. The effectiveness of a given information dissemination strategy depends on factors such as the characteristics of the innovation, the target audience, and the information channel. Getting the proper fit of the innovation, information channel, purpose, and target audience is important.

The type, quantity and quality of inputs provided by the government strongly influence food security, inputs should adequate, meaning the fertilizers and seeds used should be in recommended quantities and quality required by a particular plant in order to produce quality output, the fertilizers and seeds should also be safe to the plants and the farmers taking into consideration the pH level of the soil and type of soil in order to produce consumable outputs.

The government also influences use of the subsidies by passing laws and regulations and provision of funds in order to avail the inputs in adequate quantities, to ensure that a wider cross section of farmers can access the inputs thereby producing surplus output that can be sold by the farmers, and during the next season they can now purchase the inputs in order to produce more food and buy other food varieties they did not produce, making food to be sustainable. Therefore governments' policy can enable or limit the success of a programme such as achieving food security or surplus agricultural production to stimulate economic growth.

The intervening variables, politics, cultural values and beliefs and attitude also influence the use of government's agricultural subsidies on food security. Cultural values and

beliefs are influenced by the social systems of a community which are reflected in land use patterns and ownership which is one of the main factors of production.

Politics can influence various activities including agriculture. A conducive farming environment exists when there is no political unrest and war given that political good will is an impetus to equitable distribution of subsidies to farmers. Attitude influences the readiness of an individual to adopt and accept an innovation and are formed as farmers gain information about any programme. It shapes a farmer's way of responding to situation based on values and assumptions manifested through behaviour.

## **2.7 Summary of Literature Reviewed**

Agriculture provides a strong and vibrant micro economic pillar for rural inhabitants. Most government have taken measures to encourage intensive use of chemical and organic inputs in particular by subsidising fertilizer. These have helped to increase the production of food, in particular among small farmers who lack input and money to purchase inputs (Dreze, 2007). The exploration of the various literature emphasises that sustainable development on food security demands that all the stakeholders in the agricultural sector take active responsibility and participation in planning, implementation, evaluation and decision making to enable the laid programmes by various organs achieve their desired objectives.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research methodology that was used to conduct the study. This includes the research design, the target population, sampling design and techniques, research instruments for data collection, the research process, validity and reliability of research instruments as well as data processing and analysis techniques.

#### **3.2 Research Design**

The study adopted a descriptive survey design concerned with the influence of governments' agricultural subsidies in promoting food security in Kasipul Division.

Mugenda and Mugenda (1999), defines a survey as a method that studies a large population to discover the relative incidence, distribution and interventions of sociological and psychological variables. According to Kothari (2004), surveys are only concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing and the method of data collection happens to be either observation or interviews or questionnaire .He also defines descriptive survey as a process of describing, recording, analysing and reporting conditions that exists in the present.

According to Mugenda and Mugenda (2003) descriptive survey design is a research method that is used to obtain information that describes existing phenomena by asking individuals about their perceptions, attitudes, behaviours or values and this research design is used in collecting data from a large study population. Gay (1996) asserts that descriptive research is a process of collecting data in order to test hypothesis or to answer questions concerning the current status of the subjects in the study.

### **3.3 Target Population**

According to Mugenda and Mugenda (2003), a population is a complete set of individuals, cases or objects with some common observable characteristics while target population refers to that population to which a researcher wants to generalize the results of a study.

In this study the target population was farmers engaged in crop farming in the three regions of Kasipul Division namely; West, Central and East Kasipul that received the government free supplied input subsidies of 50 kgs bag of CAN fertilizer, 50 kgs bag of DAP fertilizer and 10 kgs bag of certified maize seeds and farmers who received government subsidized NCPB fertilizer vouchers. The study also targeted 1 District Agricultural Officer, 1 Divisional Agricultural Officer and 4 extension officers. The study targeted a total of 752 farmers in Kasipul Division that received the government input subsidies (Source: Ministry of Agriculture, 2012)

### **3.4 Sample Size and Sampling Technique**

A sample is a small production of population selected using the predetermined procedure (Koul, 1984). The population was stratified according to the three main regions in the Division. This was done to provide every region with equal chances in the study.

According to Mugenda and Mugenda (1999), sampling is a process by which a relatively small number of individuals, objects or events are selected and analysed in order to find out something from the entire population from which they are selected and 10% to 30% of the total accessible population is appreciated for the study depending on the population size.

Proportionate stratified sampling was used and 20% sample of the population from each region that received the government input subsidies. A simple random sampling was used to pick the samples from the population strata. A sample frame of farmers engaged in farming

activities was prepared to represent a target population of the 752 farmers. For the agricultural department personnel purposive sampling was used since this sampling method targets a particular group of respondents.

The main reason for the choice of proportionate stratified sampling procedure is that increased statistical efficiency and provide self-weighted sample and is much easier to carry (Copper and Schindeler, 2003), whereas according to Mugenda and Mugenda (2003), Purposive sampling is a sampling technique that allows a researcher to use cases that have the required information with respect to the objectives of his or her study. Cases of subjects are therefore handpicked because they are informative or they possess the required characteristics. It is a form of biased sampling or Non-probability sampling used when a researcher is not interested in selecting a sample that is representative of the population. Most qualitative studies use non-probability samples because the focus is on in-depth information and not making inferences

The study finally used a sample size of 156 based on 20% of the target population and the 6 District agricultural office personnel.

**Table 3.1: Total and Sample Sizes of the population for study**

<b>Region (Stratum)</b>	<b>Total Number of Farmers</b>	<b>Sample %age</b>	<b>Sample Size</b>
<b>West Kasipul</b>	<b>280</b>	<b>20%</b>	<b>56</b>
<b>Central Kasipul</b>	<b>221</b>	<b>20%</b>	<b>44</b>
<b>East Kasipul</b>	<b>251</b>	<b>20%</b>	<b>50</b>
<b>TOTAL</b>	<b>752</b>	<b>20%</b>	<b>150</b>

Source: *Kasipul Division Agricultural Office* (2012)

### **3.5 Research Instruments**

The study used open and closed questionnaires, interviews and document analysis as the main tools for collecting data.

#### **Questionnaires**

Gay (1996) explains that descriptive data are usually collected using open and closed questionnaires. The study used both open ended and closed ended questionnaires to collect data from small holder farmers. The questionnaires were structured in six sections, section one dealing with demographic information and general information meant to provide information about the respondents , section two of the questionnaire sought information on time of distribution of the subsidy, section three focused on training of farmers on the use of subsidy, section four covered access to information of the subsidy programme, section five focused of the provision of farm inputs and section six addressed the challenges and suggested solutions.

#### **Interviews**

Key informant interviews were conducted at the District and Kasipul Division agricultural offices. The interview schedule covered areas of policy, planning and implementation of the subsidy programme. The interview schedule provided additional information that is gathered by the questionnaire and also provide views of policies and regulations governing the government subsidy programme and how the sector reacts to the programme.

#### **3.5.1 Pilot Study**

A pilot study was conducted to validate the research instruments. This was done before using the questionnaires to collect data in the field. The aim was to refine both the

questionnaires and the interview schedule by testing their strengths and weakness followed by adjustments that was found to be necessary. Pre-testing the questionnaire helped iron out vague questions that would generate ambiguous responses and rephrasing questions using comments by the respondents and providing enough writing space. In addition to the pilot study, a few copies of the questionnaire were analysed to determine the appropriateness and sustainability of the methods of data analysis (Mugenda and Mugenda, 1999)

### **3.5.2 Validity of the Instruments**

An instrument is validated by proving that its items are representative of skills and characteristics that it purported to measure. Validity of research instruments ensure scientific usefulness of the findings. It is the extent to which the instruments will capture what they purport to measure (Mugenda and Mugenda, 1999).

To uphold the validity of the instruments, the researcher discussed the contents of the questionnaire with supervisor before administration in the field. This was important as it ensured unclear, ambiguous and vague questions were corrected or avoided and the insights obtained were used to make adjustments on the questionnaire items. A piloting was done on 40 farmers, and then given to the supervisor, who read and made corrections and eliminated unnecessary items to ensure its validity.

### **3.5.3 Reliability of the Instruments**

(Borg& Gall, 1986) Describes reliability as the level of internal consistency or stability of the measuring device overtime. The reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials.

The test-retest method was used in the study to determine the reliability of the research instruments, spilt half method was used where by the same questionnaire was split into two



halves and given to the same respondents after a period of time. The first lot of questionnaires was given to 20 farmers, then after two weeks the same questionnaires were given to the same 20 farmers, thereafter Spearman – Brown-Prophecy formula was used to calculate the consistency of the instrument.

Spearman – Brown-Prophecy formula value was be high meaning that the instrument was reliable. According to Carmines and Zeller (1979) an instrument with an r-value above 0.5 is considered reliable.

Spearman – Brown-Prophecy formula

$$r_{xx} = \frac{2r^{1/2 \cdot 1/2}}{1 + r^{1/2 \cdot 1/2}}$$

Where  $r_{xx}$  was the estimated reliability of the whole test,  $r^{1/2 \cdot 1/2}$  is the Pearson's correlation (r) between two halves.

Source:

Roscoe J. T. (1975). *Fundamentals Research Statistics for behavioural sciences*, New York: Holt, Rinehart and Winston, Inc.

### **3.6 Data Collection Procedure**

A permit to do the study was obtained from the Ministry of Higher Education, Science and Technology and the University of Nairobi.

These steps are necessary to effectively carry out a research and the desired sequencing of these steps (Kothari, 2004). The permit was used to brief the respondents in order to promote trust with them. Data from the respondents was analysed and results were interpreted for correctness.

### **3.7 Data Analysis Techniques**

Data entry started immediately after receiving questionnaires from the respondents in the field. Data from the questionnaires were analysed manually by first by checking for comprehensibility, completeness and relevancy. The information gathered was then summarised, tabulated and coded to facilitate analysis and ensured both accuracy and relevance of the analysis (Miles and Huberman, 1994).

The results were analysed using both quantitative and qualitative techniques. Quantitative data was analysed using simple statistics like frequency distribution tables and percentages, while qualitative data was analysed and reported in a narrative form in order to determine the relationship of the independent variables on food security

### **3.8 Ethical consideration**

Permission was obtained from the National Council of Science and Technology and the University of Nairobi Department of Extra Mural studies. Oral consent was also be obtained from each respondent before any interview or discussion is conducted. Confidentiality was assured to the respondents by ensuring no access to data collected by unauthorised persons and the respondents were at liberty to ignore what they do not wish to respond to or understand.

### 3.9 Operationalization Table.

**Table 3.2: Operationalization table**

<b>OBJECTIVE /RESEARCH QUESTIONS</b>	<b>TYPES OF VARIABLES</b>	<b>INDICATORS</b>	<b>MEASURES</b>	<b>LEVEL OF SCALE</b>	<b>APPROACH OF ANALYSIS</b>	<b>TYPES OF ANALYSIS</b>	<b>LEVEL OF ANALYSIS</b>
1. To determine the extent to which time of distribution influence the use of government's agricultural subsidies on food security.	<b>Independent variable.</b> Time of distribution of agricultural subsidies	-Planning -Consultation -Planting season	-Early -Timely -Late	Nominal	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive
	<b>Dependent variable.</b> Use of governments agricultural subsidies	Food Security	High agricultural output	Nominal	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive
2. To examine the extent to which	<b>Independent variable.</b>	-Planting knowledge	-Type of training	Nominal	-Survey -Interview	Quantitative and	Descriptive

training of farmers on the use of subsidy influence the use of government's agricultural subsidies on food security.	Training of farmers on the use of subsidy	-Crop management knowledge -Use if subsidy knowledge	-Regularity of training		-Questionnaire	Qualitative	
	<b>Dependent variable.</b> Use of governments agricultural subsidies	Food Security	High agricultural output	Nominal	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive
<b>3.</b> To assess how access to information of the subsidy programme influence the use of government's agricultural	<b>Independent variable.</b> Access to information of the subsidy programme	-Number of people	-Method of communication -Type of information	Interval	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive
	<b>Dependent variable.</b>	Food Security	High agricultural	Nominal	-Survey -Interview	Quantitative and	Descriptive

subsidies on food security.	Use of governments agricultural subsidies		output		-Questionnaire	Qualitative	
4. To examine how the type and quantity of subsidy influence the use of government's agricultural subsidies on food security.	<b>Independent variable.</b> Type and quantity of subsidy	-Type of subsidy -Quantity of subsidy -Quality of subsidy	-Type received from government -Quantity from government -Quality from government	Nominal Interval	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive
	<b>Dependent variable.</b> Use of governments agricultural subsidies	Food Security	High agricultural output	Nominal	-Survey -Interview -Questionnaire	Quantitative and Qualitative	Descriptive

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

This Chapter presents the findings of the study which have been discussed under key sub section in line with the research objectives. It also focuses on presentation of information as well as discussions and interpretation of data. The purpose of the study was to determine the influence of government's agricultural subsidies on food security in Kasipul Division.

#### 4.2 Response Rate

Response rate refers to the percentage of the number of people who responded to the research instruments divided by the number of total respondents in the sample. Copies of the questionnaires and interview schedules were distributed to 156 respondents who were interviewed and their responses were recorded and the response rate was 92% as illustrated in table 4.1.

**Table 4.1 Response Rate**

Target Population	Total Respondents	Response	Response rate
Farmers	150	138	92%
Agricultural Personnel	6	6	100%
<b>Total</b>	<b>156</b>	<b>144</b>	<b>92%</b>

Considering the findings of table 4.1, the return rate was 92%, out of this farmers had a response rate of 92% and the agricultural personnel had a response rate of 100%, implying that the return rate was very good, since a response rate of 50% is deemed adequate for analysis and reporting and according to Mugenda and Mugenda (2003,) a response rate of 60% is good and

a response rate of 70% and over is very good. The study is therefore perceived to have registered an excellent return rate.

### **4.3 Demographic Characteristic of the Respondents**

This Section describes the characteristics of the respondents used in the study. Demographic characteristics include features such as gender, age, education level and marital status. The demographic characteristics were studied in order to give an understanding of the respondents and their environment which was viewed as necessary to the analysis of the data obtained.

#### **4.3.1 Characteristics of the Respondents by Gender**

To investigate the extent to which gender of the respondents influences the government agricultural subsidies programme the respondents were asked to state their gender. Table 4.1 indicates their responses.

**Table 4.2 Characteristics of Respondents by Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Female	99	66%
Male	51	34%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.2 indicates that 66% of females received the governments agricultural subsidies compared to 34% of their male counterparts. The statistics above imply that in Kasipul Divison, more women than men engage in agricultural activities. Women are often the ones who embrace local initiatives as their male counterparts seek for means of obtaining livelihood in urban areas. Hence females benefited from the governments free inputs distributed

compared to the males since in the area most females do not have high purchasing power of inputs.

#### 4.3.2 Characteristics of the Respondents by Age

The ages of the respondents were of concern to the study as it is assisted the researcher to identify their relevance to the study. The respondents were asked to state their ages and responses were captured in table 4.3

**Table 4.3 Characteristics of the Respondents by Age**

<b>Age (Years)</b>	<b>Frequency</b>	<b>Percentage</b>
Below 18	6	4
18 – 28	24	16
29 – 39	63	42
40 – 50	47	31
Above 50	10	7
<b>Total</b>	<b>150</b>	<b>100%</b>

The table 4.3 shows that farmers under 28 years did not receive much subsidies as this is the youth age bracket and most of the youth do not identify with farming as a means of livelihood, this age is comprised of the young persons who are still either in school or are looking for employment opportunities away from home. Farmers between the age bracket of 29-39 received many subsidies, followed by farmers between the age bracket of 40 – 50. It is worth noting that majority of the farmers in Kasipul Division who received the subsidies are in the age bracket of 29-39. The implication being that this age takes care of the people who may have sought for formal employment without much success hence, have resorted to farming probably as a last resort to provide for their families.



### 4.3.3 Characteristics of the Respondents by Educational Level

The study also went on to establish the educational background of the respondents. In view of this the farmers were asked to give their education level as illustrated in table 4.

**Table 4.4 Educational Level of Farmers who Received Subsidies**

<b>Qualification</b>	<b>Frequency</b>	<b>Percentage</b>
Below KCPE	31	21
KCSE	84	56
Certificate	17	11
Diploma	13	9
Degree	5	3
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.4 indicates that of the 150 farmers who received subsidies majority were secondary graduates at 84. This indicates that farmers with below KCPE qualification and secondary qualification were actively engaged in farming compared to those respondents with certificate, diploma and degree. It was also notable that there were very few university graduates who received the subsidies. This meant that those with primary and secondary education were faced with unemployment and depended on governments free agricultural inputs or subsidised inputs. Most university graduates did not receive the inputs as most of them can afford the inputs. Small holder agriculture attracts less educated people who do not possess competitive knowledge and skills that would enable them make meaning in the labour market. This explains why highly educated farmers were few as most of them possess competitive qualifications to afford formal employment opportunities.

#### 4.3.4 Characteristics of the Respondents by Marital Status

Marital orientations were considered to be of great significance to the study for it mainly revealed how individuals engage in various economic engagements. The respondents were requested to complete the questionnaire and their responses are illustrated in table 4.4.

**Table 4.5 Marital Characteristics of the Respondents**

<b>Marital Status</b>	<b>Frequency</b>	<b>Percentage</b>
Single	10	7%
Married	48	32%
Widowed	74	49%
Others	18	12%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.5 reveals that, of the 150 respondents who filled the questionnaire, 74(48%) who stated that they received the subsidies were widowed, 48(32%) were married, 18(12%) represented other marital orientations and 10(7%) were single.

#### 4.4 The Time of distribution of subsidies on food security

The Time of distribution of subsidies was believed to be very crucial, for it would determine the level of food security in Kasipul Division, given that good harvests are always attained by early planting. The variable was measured on the basis of whether the subsidies are distributed on time or not and identification of the specific distribution time.

##### 4.4.1 Timely distribution of subsidies on food security

This parameter was regarded as a vital indicator of the possibility of farmers embracing good farming practices that would assure them of food security. Timely planting is an

important factor behind achieving high agricultural output in order to promote food security since weather patterns greatly influence rain fed agriculture. The respondents were requested to complete the questionnaire and their responses noted in tables 4.6 and 4.7.

**Table 4.6 Timely distribution of subsidies to farmers**

<b>Timely distribution of Subsidy</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	38	25%
No	112	75%
<b>Total</b>	<b>150</b>	<b>100%</b>

**Table 4.7 Influence of time distribution of subsidies on food security.**

<b>Planting Season</b>	<b>Frequency</b>	<b>Percentage</b>
Before planting	30	20%
Onset of planting	38	25%
After planting	82	55%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.6 indicates that, out of the 150 respondents who filled the questionnaire 25% stated receiving subsidies on time, while 75% mentioned receiving the subsidies late. Table 4.7 indicates that 20% of the farmers received the inputs before planting, 25% received inputs during the planting onset while 55% after planting. This implied that most farmers received the inputs after planting. The implication of the above statistics is that, even though the government's agricultural subsidies are distributed in Kasipul Division, it was normally distributed late, such that the crops remained in the farms after subsidence of rainfall leading to poor harvest.

#### 4.5 Influence of training farmers on the use of subsidies

Training impacts skills and instils confidence in the farmers as they undertake farming. A well trained farmer will be well acquainted with the job and will need less of supervision. Training improves efficiency and productivity of who show both quantity and quality performance. In this regard the farmers were asked to indicate whether they were trained on the use of subsidies. Their responses were captured and summarised in table 4.8

**Table 4.8 Training of farmers on the use of subsidies**

<b>Training</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	43	29%
No	107	71%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.8 highlights that 29% of the farmers had been trained whereas 71% were not trained on how to use the inputs. This means that the use of subsidies is a challenge to the farmers as they lack the basic skills and knowledge of using the inputs to improve the agricultural yield.

##### 4.5.1 Type of training given to the farmers

In order to improve farming efficiency relevant training of the farmers is vital using appropriate mediums. To establish this, the farmers gave their responses to the questions in the questionnaire as presented in table 4.9.

**Table 4.9 Type of training of farmers on use of subsidies**

<b>Type of Farming</b>	<b>Frequency</b>	<b>Percentage</b>
Informal	72	48%
Workshops and Seminars	16	11%
Induction by extension officers	32	21%
Demonstrations	30	20%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.9 indicates that 48% received informal training through friends, 20% through field demonstrations, 21% through induction by the extension officers and 11% through workshops and seminars. This means that majority of farmers receive informal training on the use of subsidies, and do not have requisite practical knowledge on how to use inputs and manage their farms. It has a direct impact since inputs like fertilizers must be applied in right quantities and in the right time during plants growth to realise quality output.

#### **4.5.2 Regularity of training of farmers**

Training is crucial for any programmes success. A farmer will become more efficient and productive if he is trained well and training is effective when carried out continuously. The study sought to find how often training is done to farmers on the use of subsidies.

**Table 4.10 The role of training in effective use of subsidies**

<b>Regularity of Training</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	144	96%
No	6	4%
<b>Total</b>	<b>150</b>	<b>100%</b>

The survey reveals in table 4.10 that 96% of farmers are trained less regularly with only 4% undergoing regular training. This implied that the farmers do not receive new information and skills necessary for accomplishing the set goals.

#### **4.6 Medium of access to information of the subsidy programme**

Access to information is increasingly being recognised as a prerequisite for transformation, transparency and accountability by most governments. Table 4.11 analyses the ways farmers gather information regarding the subsidy programme.

**Table 4.11 Farmers Medium of accessing information regarding the governments agricultural subsidies programme**

<b>Medium</b>	<b>Frequency</b>	<b>Percentage</b>
Through Provincial Administration	118	79%
Mass Media	6	4%
Social Interaction	26	17%
<b>Total</b>	<b>150</b>	<b>100%</b>

The survey revealed that 78% gathered information through the provincial administration through the Chiefs and Assistant Chiefs, 16% through social interaction and 76% through mass media. This implied that information in the rural areas is mostly disseminated using the provincial administration structure, which encompasses the District Commissioner, Division Officer, Chiefs and Assistant Chiefs.

#### **4.6.1 Accessibility to information regarding the government’s agricultural subsidy programme**

The study established the extent to which farmer’s accessed information regarding the governments’ agricultural subsidy programme. (Machethe, 2005) The respondents were asked whether information of the programme in their locality was accessible to them.

**Table 4.12 Farmers Accessibility to information regarding the government’s agricultural subsidy programme**

<b>Accessibility to information</b>	<b>Frequency</b>	<b>Percentage</b>
Very accessible	19	13%
Accessible	48	32%
Less accessible	62	41%
Not accessible	21	14%
<b>Total</b>	<b>150</b>	<b>100%</b>

The study revealed that 45% of the farmers interviews had access to information on the programme in Kasipul Division while 55% say that such information is least or inaccessible to them. This meant that majority of farmers were not aware of the programme.

#### **4.6.2 Provision of giving feedback to the government agency in charge of the programme**

Feedback mechanism is important as it provides an enabling environment of control of the programme by the stakeholders. Control is important because it helps to ensure that everything occurs within the parameters of the plan and deviations from the objectives or plants are identified and corrective action taken. In this regard, the farmers responses on feed were highlighted in table 4.13

**Table 4.13 Frequency of Feedback to the government agency in charge of the programme**

<b>Frequency of feedback</b>	<b>Frequency</b>	<b>Percentage</b>
Very frequent	7	5%
Frequent	27	18%
Less frequent	89	59%
Not frequent	27	18%
<b>Total</b>	<b>150</b>	<b>100%</b>

The study reveals that 59% and 18% farmers say that provision of feedback to the government agency in charge of the programme is less frequent and not frequent respectively while 5% and 18% say that feedback is very frequent and frequent respectively. This implied that feedback mechanism of the programme is not effective hence control of the programme is not adequate since, the outcome of the programme is not effectively identified and solutions sought and remedial measures undertaken.

#### **4.7 Provision of farm inputs**

Seeds fertilizers, planting farm equipment and insecticides are no doubt the most important inputs in agricultural production and have the greatest potential to increase on-farm productivity and enhance food security. The table 4.14 analyses the responses from farmers on type of inputs received from the government.



**Table 4.14 Type of input received as an agricultural subsidy from the government**

Type of Input	Frequency	Percentage
Fertilizer	45	30%
Seeds	95	63%
Farm equipment	0	0%
Voucher	10	7%
Insecticides		0%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.14 shows that majority of the farmers at 63% received seeds while 30% receive fertilizer. Only 7% receive the vouchers while none of the farmers received insecticides and farm equipment. This implied that the government mostly provides seeds to the farmers with a few getting the fertilizer and vouchers. This impact's greatly on the agricultural output whose yield is not dependent on the provision of seeds, fertilizer or vouchers in isolation of other necessary farm inputs.

#### 4.7.1 Receipt of Inputs by farmers

The study went on to establish how often farmers receive subsidies from the farmers, and their responses have been summarised in table 4.15

**Table 4.15 Receipt of inputs by farmers from the government**

Receipt of Inputs	Frequency	Percentage
More often	16	11%
Often	54	36%
Less often	80	53%
<b>Total</b>	<b>150</b>	<b>100%</b>

Table 4.15 illustrates that 53% of the farmers receive subsidies less often, while 36% often and 11% more often. This pointed out the fact that the supply of inputs to farmers is not frequent and therefore food security through high agricultural output is not attainable.

#### 4.7.2 Quantity and Quality of inputs received by farmers

The study sought to find out the extent to which the quality and quantity of inputs influence food security and the findings illustrated in table 4.16.

**Table 4.16 Quantity and Quality of inputs and food security.**

<b>Right Quantity &amp; Quality</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	6	4%
No	144	96%
<b>Total</b>	<b>150</b>	<b>100%</b>

From the table 4.16, 96% of the farmers assert that the quantity and quality of inputs are not in accordance with the agro-climatic conditions of their local areas. This implied that the agricultural yield is low since the quality and quantity of inputs does not match the size of the farms and the nature of the soil, hence not able to produce sufficient, quality and sustainable output.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter wraps up the study by providing a summary of the main findings of the study and presenting salient conclusions. Furthermore, it highlights the contribution the study has made to the body of knowledge and a number of recommendations on the influence of government's provision of subsidies on food security, drawn from the study findings that are pertinent to policy making. This chapter then ends with suggestions for further research.

#### **5.2 Summary of the Study Findings**

The study was conducted within Kasipul Division:

The study findings revealed that gender had a significant influence on the distribution of subsidies, most females engage in small holder farming at 66% compared to their male counterparts at 34%. Since the men seek for means of obtaining livelihood in urban areas.

The study also asserted that majority of the farmers fall between the age brackets of 29-50. Most youths do not identify with farming as a means of livelihood. The study has also shown that small holder agriculture attracts less educated people with either a KCSE certificate at 56% or KCPE certificate at 21%. The highly educated people do not embrace farming. On marital status the widowed were the most beneficiaries at 49% since most of them are needy with no adequate source of income making them be dependent on free subsidies.

One of the notable findings in this study is that the government does not distribute the subsidies at the right time during planting season, making the farmers to plant without fertilizers or use non certified seeds which in the end lead to low yields.

The study further showed that key in the use of the subsidies in farmers training. Most farmers lack requisite knowledge on how to use inputs with only 29% getting training. Most

farmers receive informal training through friends and only 8% of the farmers are regularly trained.

Access to information is one of the variables that have influenced the use of governments' agricultural subsidies on food security. Most farmers at 79% accessed information about the programme from the provincial administration personnel. It is evident that in rural areas the effective medium of disseminating information is through the provincial administration structures. In addition to this, information about the programme is not very accessible to the farmers since only 45% of farmers interviewed agreed that the information was accessible to them. Feedback of the programme was not frequent at 18% less frequent at 59%. Meaning there was no effective feedback mechanism put in place.

The study also found out that most farmers receive certified seeds from the government at 63% with fertilizers at only 30%. Hence most farmers plant the seeds without fertilizers which affect the output, and further to this the quality and quantity of inputs are not in accordance with the agro-climatic conditions in their respective farms. The distribution of subsidies is also less often that 53% making most farmers adopt the traditional farming system.

### **5.3 Conclusions**

From the study, it is evident that female farmers benefited compared to their male counterparts, farmers who receive subsidies were majorly between the age bracket of 29-50, highly educated farmers were few and most beneficiaries were widowed farmers. The study has also shown that the time of distribution of subsidies is a major challenge since subsidies are not distributed in time. Training exposes the farmers to right agricultural techniques in order to promote proper use of inputs. Access to information about the programme is an area that should be addressed so that information about the programme can reach a wide cross section of the rural farmers. The feedback mechanism is lacking in the governments programme

rendering control to be a challenge. Furthermore quality and quantity of inputs is one of the major determinants of food security and from the study farmers do not receive the right quality and quantity of inputs.

All in all, the study concluded that, whereas the government had undertaken various programmes to promote food security, there is a lot that is yet to be accomplished in terms of planning, management, implementation and control. Given conducive environment and adequate support, farmers in Kasipul Division can realise food security and enhance their livelihood since agriculture has a positive bearing on economic development and growth.

#### **5.4 Recommendations**

In light of the findings and conclusions of this study, the following policy making recommendations and recommendations for further research were made:

##### **5.4.1 Recommendations for Policy Making**

1. Influence of time of distribution of the agricultural subsidies on food security in Kasipul Division; the study revealed that subsidies are distributed after the plating season, in response to this the government through the Ministry of Agriculture should distribute subsidies to farmers at the right time before the planting season as this will enhance proper use of the inputs supplied. The study also recommended due to climate change patterns as a result of global warming there should be irrigation schemes and water harvesting techniques put in place to avoid dependence on rain fed agriculture.
2. Influence of training of farmers on the use of agricultural subsidies on food security in Kasipul Division; the study established that farmers are not formally and regularly trained on how to use the inputs. In response to this challenge, the study recommends that, more agricultural extension officers should be deployed by the government to

facilitate training of farmers in order to equip them with the necessary skills required for effective farming and the trainings should be regularly done to increase efficiency.

3. Influence of access to information of the subsidy programme on food security in Kasipul Division; the study established that information about the subsidy programme was not much accessible to many small holder farmers and feedback mechanism of the programme was not adequate. In response to these problems the Government through the Ministry of Agriculture should use a combination of multiple information dissemination apparatuses and mediums should be explored complementarily in conjunction with the agricultural extension towards meeting the diverse needs of the rural dwellers and reach a wide cross section of farmers and, the feedback mechanisms of the programme should be strengthen to promote successful implementation of the programme.
4. Influence of provision of farm inputs on food security in Kasipul Division; the study established that the type, quality and quantity of inputs did not match the agro-climatic conditions of the area. The study recommended that the government should increase the quantity of inputs and give farmers inputs according to their land sizes. The quality and type of inputs should also be considered taking into considering the agro-climatic conditions of the area like soil type, temperature, level of humidity among others. In addition to this more financial support should be provided to rural farmers to enable them secure funds that will enable them purchase the right quality and quantity of inputs. In light of this, the loans given to farmers by the Agricultural Finance Cooperation should be affordable with no bureaucracies to enable majority of farmers take loans.

## 5.4.2 Recommendations for Further Research

The following questions were suggested to form a basis for further investigations.

1. To What extent do factors underlying effective Governments' Agricultural Subsidies on food security apply to other regions in Kenya?
2. What influence do the type, quality and quantity of inputs have on food security?
3. What influence does rain fed agriculture have on food security?

## 5.5 Contribution to the Body of Knowledge

The findings of this study would contribute to the body of knowledge as illustrated in table 5.1

**Table 5.1 Contribution to the body of knowledge**

<b>Research Objectives</b>	<b>Contribution to the body of knowledge</b>
To determine the extent to which time of distribution of subsidies influence food security in Kasipul Division.	Timely distribution of subsidies is a major factor in promoting food security through timely planting and harvesting.
To establish the extent to which training of farmers on the use of subsidies influence food security in Kasipul Division.	Training promotes proper use of inputs and adoption of modern farming techniques.
To determine how access to information of the subsidy programme influence food security in Kasipul Division.	Access to information about the programme enables many people to embrace the programme since they are aware of its existence.
To establish the extent to which provision of farm inputs influence food security in Kasipul Division.	Provision of quality and right quantity of inputs is a major challenge in the programme but can be improved through proper planning, management and control.

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## APPENDICES

### Appendix I: Letter of Transmittal

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S.C.D.E,  
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NAIROBI.  
E-mail: [mawuor@yahoo.com](mailto:mawuor@yahoo.com)  
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August 2012.

Dear Sir/Madam,

**RE: USE OF GOVERNMENT'S AGRICULTURAL SUBSIDIES ON FOOD SECURITY  
IN KASIPUL DIVISION; HOMA BAY COUNTY.**

I am a post graduate student of the University of Nairobi carrying out a research project for the Master of Arts in Project Planning and Management on the above stated topic.

I humbly request you to assist me by filling in the designed questionnaire as accurately as possible. The information you will provide will be used strictly for academic purposes and will therefore be treated with utmost confidentiality. You are therefore requested to avoid disclosing your identity in this document.

Thanks in advance for your cooperation in this crucial exercise.

Yours Faithfully,

.....

**Eunice Irene Awuor**

## Appendix II: Questionnaire for Farmers

This questionnaire is intended to collect information about the influence of governments' agricultural subsidies on food security in Kasipul Kabondo.

Please fill the blank spaced provided or tick (√) where necessary. All the information volunteered will be treated with utmost confidentiality.

### Section A. Demographic characteristics of the respondent

1. What is your gender?

a) Male

b) Female

2. Indicate your age

a) Below 18

b) 18 – 28

c) 29 – 39

d) 40 – 50

e) Above 50

3. What is your educational level?

a) Below KCPE

b) KCSE

c) Certificate

d) Diploma

e) Degree

4. Give marital status

a) Single

b) Married

c) Widowed

d) Others, Specify \_\_\_\_\_

**Section B. Time of distribution of subsidies.**

1. Are the subsidies distributed on time during the planting season?

a) Yes

b) No

2. Indicate the time of planting season when the subsidies distributed in your locality

a) Before planting

b) Onset of planting

c) After planting

3. Does the time of distribution of subsidies influence food security in your area?

a) Yes

b) No

4. If yes, briefly explain the extent to which this is true.

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**Section C. Training of farmers on the use of subsidies**

1. Are you trained on use of subsidies?

a) Yes

b) No

2. If yes, indicate the type of training

a) Informal

b) Workshops & seminars

c) Induction by extension officers

d) Field demonstrations

3. How often is training done? Tick appropriate

a) More regularly

b) Regularly

c) Less regularly

4. Does training influence the use of government's agricultural subsidies in addressing food security in your area?

a) Yes

b) No

5. If yes, explain how training on the use of subsidies contributes to food security in your area

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#### **Section D. Access to information of the subsidy programme**

1. How do you access information about government's agricultural subsidy programme in your area?

a) Through provincial administration

b) Mass media

c) Social interaction

2. How accessible is the information about government's agricultural subsidy programme in your area?

a) Very accessible

b) Accessible

c) Less accessible

d) Not accessible

3. Do you have a provision of giving feedback to the government agency in charge of the programme?



a) Yes

b) No

4. If yes, give the frequency of giving feedback.

a) Very frequent

b) Frequent

c) Less frequent

d) Not frequent

5. Explain how accessibility to information about government's agricultural subsidy programme influence food security in your area

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### **Section E. Provision of farm inputs**

1. State the type of input you have received as an agricultural subsidy from the government.

a) Fertiliser

b) Seeds

c) Farm equipment

d) Voucher

e) Insecticides

f) Others, (specify) \_\_\_\_\_

2. How often do you receive such inputs?

a) More often

b) Often

c) Less often

3. Are the inputs in right always in right quantity and quality?

a) Yes

b) No

4. Explain the contribution of farm inputs to food security in your area

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**Section F. Challenges and suggested solutions**

1. What are the challenges in the use of government subsidies on food security?

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2. What solutions would you suggest to enhance efficiency and success of the above programme

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### **Appendix III: Interview Schedule**

Interview schedule for the agricultural officers and extension officers

1. What is your current position?
2. How do you view the performance of the government subsidy programme in our extension area?
3. What should be done to improve the performance of the programme to achieve its goal of enhancing food security?
4. What are the challenges that you face as a government agent or farmer in the programme?
5. Suggestions on ways of improving the success of the programme in the division?