ASSESSING THE CONTRIBUTION OF MARKET INFORMATION ON AGRICULTURAL DEVELOPMENT

CASE STUDY: NATIONAL AGRICULTURAL ADVISORY SERVICES (NAADS) PROGRAM IN NAMASAGALI SUB COUNTY IN KAMULI DISTRICT

A dissertation presented to

SCHOOL OF ARTS AND SOCIAL SCIENCES

in partial fulfillment of the requirements for the award of the degree

Master of Arts in Development Studies

UGANDA MARTYRS UNIVERSITY

NAMPOMBA AMINAH
2009-M023-20010

Supervisor: Ssengooba George Mukasa

January 2014

Dedication

I dedicate this work to my parents, Mrs. Sarah Nyanzi and Mr. Peter Nyanzi, My husband, Joseph Ngobi and children; Molly Janet, Jonathan andJemimah who inspired me to pursue this course.

Acknowledgement

I express my gratitude to several people for the support they provided during the course of this study, for without their support, it would not have been possible to have this work in its existing form. I am particularly grateful to my supervisor Mr. George Mukasa Ssengooba for the great guidance throughout the study. His thoughtful comments encouraged me to improve this document. It is a pleasure to thank my dear Mum Mrs. Sarah Nakanwagi Nyanzi, my brothers and sisters most especially Mathias Mitembo Musisi, Haawah Nampiima and my daughter Kadondo Molly Janet who supported me by taking care of the family throughout my study time.

I appreciate the support I enjoyed from Mrs. Sarah Muyonjo , May God Bless you abundantly!

My gratitude also goes to Nulu Nantumbwe, Nalumu Vivian Juliet and Mathias Musisi who worked with me during the data collection exercise and to my colleagues at Uganda Marty's University, Nkozi campus. Their moral support and encouragement during the study meant a great deal to me.

I owe my deepest gratitude to my husband Joseph Ngobi and my children Joy and Jeremiah who bore my absence during the time of the study. I will forever be grateful for their understanding.

I offer my regards and pray for God's blessings to all of those who supported me in any respect during the completion of the study.

Above all, I thank the almighty God for walking with me to this great achievement.

Tableof Contents

List of figures

List of tables

Acronyms

AS-DSIP	:	Agricultural Sector Development Strategy and Investment Plan
CBO	:	Community Based Organization
CEEWA	:	Council for Economic Empowerment for Women of Africa
CIGS	:	Common Interest Groups
CPBC	:	Cartagena Protocol on Biodiversity
CTA	:	Center for Tropical Agriculture
CBD	:	Convention and Biological diversity
EPAS	:	Economic Partnership Agreement
EAC	:	East African Community
EU	:	European Union
FAO	:	Food and Agricultural Organization
FFO	:	Farmer Forum Organization
GMO	:	Genetically Modified Organisms
ICTS	:	Information and Communication Technologies
IEC/DC	:	Inform Education &Communication/Dev't Communication
IITA	:	International Institute for Tropical Agriculture
KDFA	:	Kamuli District Farmers Association

KII	:	Key Informant Interviews
L.C	:	Local Council
NAADS	:	National Agricultural Advisory Services
NARS	:	National Agricultural Research Systems
NPA	:	National Planning Authority
NDP	:	National Development Plan
NGO	:	Non-Governmental Organization
PMA	:	Plan for Modernization of Agriculture
RDS	:	Rural Development Strategy
SAARI	:	Serere Agriculture and Animal Production Research Institute
SPSS	:	Statistical Package for Social Scientists
SSF	:	Small Scale Farmers
SMS	:	Short Massage Services
ToT	:	Transfer of Technologies
UCDA	:	Uganda Coffee Development Authority
UN	:	United Nations
UNDP	:	United Nations Development Program
PHH	:	Post Harvest Handling

Abstract

This study was an assessment of the contribution of market information to Agricultural development in Namasagali Sub County in Kamuli District. The objectives of the study were; to identify the role of market information in agriculture development, to examine the extent of market information needs of farmers and to determine the challenges faced by farmers in accessing market information and suggested solutions to the challenges.

A case study research design was used; both quantitative and qualitative methods of data collection were adopted. A questionnaire guide and interview schedules were used to collect data from a total of 100 respondents who were local women and men (45 males and 45females engaged in agriculture as well as 10 keyinformants including 1 District NAADS coordinator, 1 Sub county NAADS Coordinator, 1 Agricultural extension officer, 4 LC I chairmen, District Agricultural Officer, District production officer and chairman farmers forum. These were selected using simple random and purposive sampling techniques.

Data was edited, coded, classified and tabulated with the Statistical Package for Social Scientists (SPSS) to generate tables. Microsoft word 2003 version was also used to generate figures for the data. Qualitative data from the interviews was dealt with using thematic content analysis and field notes were categorized according to the study themes and subthemes.

Findings of the study revealed that Government through the NAADS program has tried to avail market information to farmers and this has contributed to Agricultural development, However, the information has not been tailored and translated into farmers information need requirements; for example; most of the information is not in local language and there is late submission of the information to farmers.

The study therefore recommended that the NAADS secretariat hire a specialist in Agribusiness and as well directly fund the market information strategy to enable farmer's access to timely market information.

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

This study is about assessing the contribution of market information in agricultural development in Namasagali Sub County in Kamuli District. It brings about the description of the background of the study, statement of the problem, general and specific objectives, research questions, scope, significance, and conceptual framework of the study.

1.2 Background to the study

The National Agricultural Advisory Services (NAADS) Program is now the biggest pillar that feeds into the Prosperity for All (Bonabagagawale) and the Plan for Modernization of Agriculture (PMA). It is responsible for addressing one of the key underlying factors of rural poverty in Uganda. While this Program attempts to contribute to Uganda's poverty eradication through empowering farmers, it is guided by the following underlying objectives; to enhance commercialization of farmers through supporting various farmer groups, to increase farm incomes through integration of production, post-harvest handling, value addition and agro-processing and increase farm household food security among others.

Turrall (2003), a NAADS Information and Communication Support Officer at (Serere Agricultural and Animal Production Research Institute –SAARI) in his report dated 4th September, asserts that "NAADS program forms one of the seven pillars under the PMA whose goal is to assist in eradicating poverty by modernizing Agriculture by 2017".

NAADS envisages a new Agricultural extension service approach with underlying principles including farmer empowerment and market –orientated extension.

Among the principles highlighted is the integration of Agricultural market information system as part of the communication strategy to emphasize directing of information to specific audiences.

UNDP/FAO (1995), argued that technology and information per see were insufficient elements to propel an increase in Agriculture productivity and rural incomes. Other demands were voiced out by communities in which they pointed to the need to make services in all sectors more responsive to barangay needs including credit, infrastructure development, marketing, health and education.

UN publication (2007), on Food and Agriculture reported that Farm management data and information systems under strengthening services in Afrifood systems also supports the idea that farm management decisions are underpinned by good information. To make good decisions farmers need information from different sources. Farmers require timely and appropriate information at every stage in the farm management decision- making process!

NAADS master document of the task force (2001), indicate that information and communication will be a supportive tool in the commercialization process. In the revised guidelines that now have been adopted by the Ministry of Agriculture Animal Industry and Fisheries (draft), the document supports integration of training by extension workers and where they are not available it allows hiring of local qualified subject matter specialists in enterprises that farmers in that particular locality have decided to undertake.

This raises scenarios if information provided to farmers through the proposed modes therefore, has had any contribution onAgricultural development. Information to be able to transfer such knowledge for the benefit of farmer decision making should be through improved productivity

and increased income and livelihoods which are underpinned on relevant and appropriate modes of communication.

Scholars like Turrall (2003), add that any mode of communication depends on the audience, type of information and the objectives of communication. They also agree that communication is not merely sender – receiver process but communication is seen as a linear, sender to receiver process and participatory if community empowerment is to be realized.

Whereas all stakeholders in the already developed countries support market information as one of the engines of agriculture development, South African developing Countries like Malawi and Zambia also argue in support of farmers to enhance commercialization to increase agricultural development.

United Nations Development Program Report (1993), also suggests as is quoted "People's participation is becoming the central issue of our time to which we add, and participation requires communication. It also adds that, development programs can only realize their potential if knowledge and technology are shared effectively, and if populations are motivated. However,unless people themselves are the driving force of their own development, no amount of investment or provision of technology and inputs will bring about any lasting improvement in their living standards". United Nations Development Program report (1993)

It is also important to note that helping people at all levels to communicate empowers them to recognize important issues and find common grounds for action and builds a sense of identity and participation in order to make their own decisions. Using appropriate modes of communicating market information to farmers will enhance their ability to forecast commodity

prices, planting seasons, build consensus on products on demand in the market and maintain quality to make profit. Anthony, Understanding farmer's Communication networks(1995)

Traditional and popular media such as folk theatre, dances, puppet shows and popular poetry, as well as rural press linked to literacy programs and audio-visual materials can be highly effective channels for disseminating development information and stimulating community action. Recommendation have been made on agriculture information communication campaigns that will include the following if is to succeed; informal and formal community meetings, traditional ceremonies- for instance burial and funeral gatherings, religious gatherings- church and mosque venues, local press – electronic media and community radios. It adds that holding of community forums and debates should be in local languages due to low literacy rates.Printed information, dance and drama shows, storytelling- folklore and such information kiosks for information technology in India have been well developed to give other services like centers for information dissemination and at the same time as sources of market information to farmers. Mcgee andPrusak (1993)

Since the late 1960s, the National Agricultural Research Systems (NARS) of many nations have been centralized. The transfer of technology (TOT) model, which considers research the starting point for disseminating agricultural knowledge, has been the standard for NARS in many countries. Anthony (1995)

According to a reference manual on improving agricultural extension (1998), Information is a critical resource in the operation and management of organizations. Timely availability of relevant information is for effective performance of managerial functions such as planning, organizing, leading and control. An information system in an organization is like a nervous

system in the human body; it is the link that connects all organization's components together and provides for better operation and survival in a competitive environment. Indeed today's organizations and functional groups run on information. Reference manual on improving agricultural extension (1998).

The inception of (NAADS program was premised on non-existence or very fragile groups, traditional, weak and challenging farmer development structures in the district. With such a history of subsistence farming and fragmented communities, the introduction of group formation, group leadership and institutional development did not find a smooth road.

Market Information

Centre for Agriculture and Rural Cooperation (2001), points out that the effectiveness of managing market information depends on the availability permanent structures and the means to gather, process and disseminate the information to farmers. Also the structure's effectiveness depend largely on the availability of equipment such as telephones, fax machines, newsletter, e-mail facilities and the ability to use media (rural radio, local newspapers).

It is also argued, that market information is the means to access input information, product information, market sources ability for farmers to organize market forums where farmers could sell their products ranging from local, regional, national and if possible international markets through establishment of better interaction between farmers and other operators could be a farmer forum Organization (FFOs) as a meeting place for commercial transactions. The success of this would depend largely on the quality of information from the various partners and conviction of benefit from such exchange.

Information and Communication management practices in FFOs is also supported by the existence of the establishment of an information service on basic commodity prices, regional

exchange of agriculture products, information on agricultural markets and the economic, social and cultural role of farmers; centers. Yet under the NAADS program these could exist but their effectiveness and being operational for the benefit of farmers is still limited, therefore, the need to study this variable.

In developing countries, market information initiatives are often part of a broader interventions and part of the Agricultural marketing and Agribusiness development strategy that many governments are actively engaged in. It is also argued that long transaction chains, lack of transparency, lack of standards and insufficient access to markets for products has perpetuated low incomes in predominantly agrian- economies. Likewise this argument emphasizes the need to utilize the available structures to farmers get timely and correct market information in order to facilitate their engagement in gainful employment of commercial farming.

In describing the idea of information markets, Mcgee and Prusak (1993) note that people barter information, use it as an instrument of power, or trade it for information of greater value.

Access to Information Inputs implies that farmers 'have an opportunity to know about the existence of where the inputs are available for instance improved seeds, animal breeds for both dairy and beef and for the case of poultry where the layers and meat chicken exist locally, regionally and nationally.

Market information needs of small scale farmers include:

- Information on product planning. This is information on what crop and variety to grow at a given season with marketability of such a crop as an important deciding factor.
- Information on current prices.

- Information on forecast of market trends. This type of information assists farmers in planning their market products.
- Information on sales timing. This assists farmers in ensuring that they do not cause a market glut. It enables them to stagger harvesting and quantity for marketing.
- Information on improved marketing practices. It includes information on improved harvesting methods. This information is disseminated by field level extension workers by demonstration on farmer's fields, at local and wholesale markets.
- Information on group marketing. This enables small scale farmers to have organized sales of marketable surplus and bulk transport of produce. Frazer and Villet (1994)

Product market information is that weekly information availed to farmers in the major markets in Kampala forexample; about a bunch of banana, a kilo of beans, ground nuts, posho, cow peas, a tin of tomatoes, a heap of mangoes, and a kilo of Irish potatoes, andwhere the market venues are available for their respective local markets and other bigger markets. Food net (May 2009),

There are two important aspects to the marketing of agricultural products. The first has to do with the physical process that brings products from producers to consumers; the fundamental stages of these processes are the collection, packaging, transport, processing. (FAO 1996).

Market Information Forumshowevermeans the level at which farmers are able to organize themselves in a common place locally that brings them together purposely to share market information trends and availability of local markets for their agricultural products before exploring the other bigger ones.

On the other hand, poverty means being unable to afford basic human needs, such as clean water, nutrition, health care, education, clothing and shelter. This is also referred to as absolute poverty

or destitution. Relative poverty is the condition of having fewer resources or less income than others within a society or country, or compared to worldwide averages. Globally, about 1.7 billion people live in absolute poverty

Before the industrial revolution, poverty had mostly been the norm. Poverty reduction has historically been a result of economic growth as increased levels of production, such as modern industrial technology, made more wealth available for those who were otherwise too poor to afford them (Solley, Bobbie, 2005).

Poverty in Uganda is considered to have increased for the majority of people in the present era of structural adjustment programs. In terms of absolute numbers, poor people constitute 61% of the population, while 30% constitute the absolute poor (Kyesimire, 1996).

Although over 90% of the rural population in Kamuli District is engaged in Agriculture for their survival, it is still subsistence with little efforts to engage in commercial farming. Providing extension advice to farmers is not given priority at all. Majority of men engage in farming only to sell their labor to a few prominent farmers in the district and women grow food for consumption a role which has been passed onto them by their male counterparts.

With the inception of Community Based Organizations (CBOS), Non-Governmental Organizations (NGOs) operating in the district, demonstration farmer, and Lead farmer and nucleus types were unheard of until the farmers' association, Kamuli District farmers Association (KDFA). This is a semblance of farmer development group started with a focus of bringing farmers together for a common enterprise promotion. The Uganda coffee development authority (UCDA) is very well known in pioneering this in Kamuli district through Kamuli District farmers' Association and other local community farmer organizations like Buzaaya young farmers association led by Elizabeth Muzaaya in Buzaaya County.

With the existence of all the above mentioned community based and Non-Governmental Organizations, they have done little in providing agricultural information to farmers yet in Uganda 90% of the population are engaged in Agriculture (Nabasirye & Sicco, 1996).

Despite the prominent role agriculture plays in Uganda's economy, farmers do not get an appropriate share of agricultural extension advice and other services. At the thirteenth FAO regional conference for Africa (Harare, July 1984) 30 African ministers drew up the Harare Declaration on Food Crisis in Africa. Although the ministers pledged to give highest priority to agricultural and rural development, and despite the pronouncements of the Lagos plan, there is no mention market information was not given priority.

Farmers in Namsagali Sub County could be experiencing a similar situation. They get involved in all the farm activities devoting their resources to see that agricultural production increases. In-spite of their concerted efforts, they receive very little or no extension advise or agricultural advisory services and market information.

1.3 Statement of the Problem

Agriculture is an information dependent sector where there are new and rather complex problems facing farmers every day. The information needs of small scale farmers revolve around the resolution of problems such as pest hazards, weed control, moisture insufficiency, soil fertility, farm credit, labor shortage, soil erosion and so forth.

The NAADS program has a structured market information communication strategy in place and the information market analysis, collection and dissemination tools highlighted in the implementation master document. However farmer's access to information has been poor and inefficient and this has hindered agricultural development.

The study therefore seeks to assess the contribution of market information to agricultural development.

1.4 The objectives of the study

This study was based on both general and specific objectives presented below.

1.4.1 The general objective

The general objective of the study was to assess the contribution of market information on agricultural development

1.4.2 Specific objectives

The specific objectives of the study were:

i) To establish the market information needs of farmers under the (NAADS)program in Namasagali, Sub County in Kamuli District.

ii) To establish how market information has contributed to agriculture development under the NAADS program in Namasagali, Sub County in Kamuli.

iii) To determine the challenges faced by farmers in accessing market information and suggest mechanisms to overcome the challenges.

1.5 The Research questions

The research was guided by the following research questions;

(i) What is the extent of market information needs of farmers in agriculture development under the NAADS program in Namasagali Sub County in Kamuli?

(ii) How has market information contributed to Agriculture development under the (NAADS) in Namasagali, Sub County in Kamuli District?

(iii) What are the challenges faced by farmers in accessing market information and what mechanisms can be applied to overcome the challenges?

1.6 Scope of the Study

1.6.1 Geographical Scope

The study assessed the contribution of market information on agricultural development. The geographical scope was in one sub county of Namasagali in Kamuli District. Kamuli District has a projected population of 779,039 people (2002 census) and 52% are female of 15-30 years dependents. Kamuli district is also made up 18 sub counties and 114 parish administrative units. Kamuli district is located in southeastern Uganda.

It lies at average altitude of 1083m above sea level and extends from latitude 00- 56' N /330-05' E to longitude 01- 20 N /330- 20' E. Kamuli covers an area of 4,348km2 of which 3332km2 is land and 1016km2 (23%) is water. The annual growth rate is 5.1%. Kamuli has a population density of 236 persons per Km2.

1.6.2 Conceptual Scope

This study focused on the assessment of the role of market information in agriculture development in Namasagali, Sub county and present solutions to the problems that could be hindering information access in agriculture in this area. By specifically establishing the market information needs of farmers, establishing how market information has contributed to agriculture development, and determining the challenges faced by farmers in accessing market information and suggest mechanisms to overcome the challenges.

1.6.3 Time scope

This study was based on the period of 5 years from 2008- 2013 because this is the time the NAADS program has been most active in the District.

1.7 Significance of the Study

The research will benefit the policy analysts to review the National Agricultural Advisory Services and Prosperity for All program, redirect and guide on the implementation process with emphasis on market information strategy.

To local governments where actual implementation takes place, it will benefit from redirecting in term of using appropriate modes of communication that will influence community action and thus agricultural development.

To donors, this research will provide a strategy to check on whether market information component as designed has worked for farmers and make appropriate recommendations for information dissemination modes that are relevant and appropriate to rural community participation. Emphasis should be put on the New National Agricultural Advisory Services and Prosperity for All (Bonabagawale) program as a basic tool for rural development.

To farmers, the research will provide a forum for suggesting improvements in the market information needs with stakeholders' participation that is crucial for any community program. Also the need to provide market information that is relevant and that makes an attempt to answer farmers' needs. This is because, empowering farmers with quality and appropriate market information does influence their decision making, control and ownership of programs.

For education Institutions, this research will provide literature and empirical evidence about market information component of the New National Agricultural Advisory Services and Prosperity for All programs and for other researchers to find gaps for further research.

1.8 Justification of the study

In 2005 the Ministry of Agriculture Animal Industry and Fisheries (Uganda) launched a Rural Development Strategy, 2005, "the majority of the 3.8 million households in Uganda are rural based and depend on agriculture for their livelihood and they constitute the largest part of the private sector in terms of population, employment and exports. Unfortunately, the standards of living of these agro-based households remain at the lowest level of income in the world.

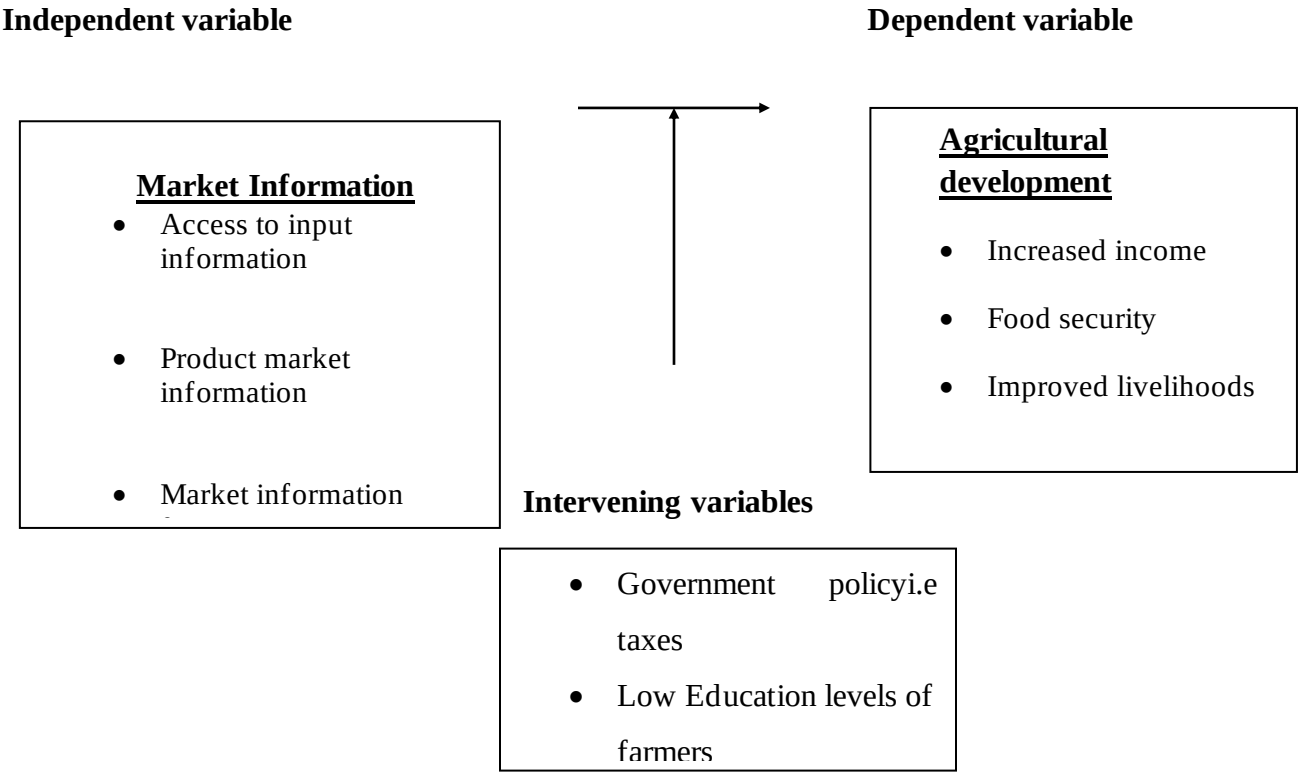
It is against this background that government has produced the Rural Development Strategy (RDS) to facilitate profound agrarian productivity to enhance poverty alleviation and eradication. But still the roles of market information towards agricultural production is still not given priority yet agriculture is key to the development of the economy.

Similarly, government came up with the NAADS program and this has been carried out on a sub county level in different districts in Uganda but still market information is not given priority in achieving the best from this program.

Thus, with the above programs in place, there was a need to carry on this study by focusing on the contributions of market information in agricultural production and address the challenges farmers face in accessing market information in Namasagali Sub County.

1.9 Conceptual frame work

Figure 1: Conceptual Frame work



The conceptual frame work shows the relationship between variables, for this case it indicates the independent variables (Market information) and the dependent variables (Agricultural development), and the intervening variables show the link between the independent and dependent variables.

The independent variables (market information) mainly include the various forms of information. These have a direct impact on the dependent variables (Agricultural development).

The intervening variables are the variables that may be ignored but may affect the research results. In this case the intervening variables are Government policy and education levels. This is shown in the above illustration.

1.10 Definition of key concepts and terms

Market Information. According to this study market information referred to access to input information, product information, market sources and market forums where they can sell their products ranging from local, regional, national and if possible internationally.

In describing the idea of information markets, Mcgee and Prusak (1993) note that people barter for information, use it as an instrument of power, or trade it for information of greater value.

Access to Information Inputs: Under this independent variable implied the farmers' opportunity to know about the existence of where the inputs are available for instance improved seeds, animal breeds for both dairy and beef and for the case of poultry where the layers and meat chicken exist locally, regionally and nationally.

Product Market Information: Refers to product information that is weekly availed to farmers in the major markets in Kampala about a bunch of banana, a kilo of beans, ground nuts, posho, cow peas, a tin of tomatoes, a heap of mangoes, a kilo of Irish potatoes, where the market venues are available for their respective local markets and other bigger markets. Food net (May,2009)

According to FAO, 2001,there are two important aspects to the marketing of agricultural products. The first has to do with the physical process that brings products from producers to consumers; the fundamental stages of these processes are the collection, packaging, transport, processing.

Market Information Forums: This meant the level at which farmers are able to organize themselves in a common place locally that brings them together purposely to share market information trends and availability of locally markets for their agricultural products before exploring the other bigger ones.

Market Information Sources: Under this study it referred to how farmers under the NAADS program access market information in the study area for instance through radios, newspapers, mobile phones, internet, farmer meetings, farmer training venues, funeral rights ceremonies, burial venues, wedding meetings and other locally organized ceremonies.

Farmer Income: under this study of NAADS program in Kamuli district, this dependent variable referred to a farmer being able to produce for food and balance for sell for his/her income to meet other domestic requirements like school fees, good shelter, clothing and other essential needs like sugar, a kilo of meet.

Investopedia explains 'Farm Income' as the profits and losses incurred through the operation of a farm. A farm income statement (sometimes called a farm profit and loss statement) is a summary of income and expenses that occurred during a specified accounting period.

Food Security: This variable referred to the ability of a farmer being able to produce adequate food to consume with his/her family members throughout the year irrespective of the difficulties in seasons. Food security referred to three components of availability, Nutrition and accessibility.

Food security may also refer to a household's physical and economic access to sufficient, safe, and nutritious food that fulfills the dietary needs and food preferences of that household for living an active and healthy life.

Conclusion

This chapter covered the definition of key terms, background of the study, statement of the problem, objectives of the study, research questions, scope of the study, significance of the study, justification of the study, the conceptual framework and therefore introduces chapter two which is the literature review.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter examines the views of the other writers especially those who have researched on the areas of contribution of market information in agriculture development.

The literature will be reviewed with the objective of identifying gaps which the researcher intends to use to justify the statement of the problem.

Uganda's agricultural perspective and the natural endowments

Uganda's favorable soil conditions and climate have contributed to the country's agricultural success. Most areas of Uganda have usually received plenty of rain. In some years, small areas of the southeast and southwest have averaged more than 150 millimeters per month. In the north, there is often a short dry season in December and January. Temperatures vary only a few degrees above or below 20°C but are moderated by differences in altitude. These conditions have allowed continuous cultivation in the south but only annual cropping in the north, and the driest Northeastern corner of the country has supported only pastoralism. Although population growth has created pressures for land in a few areas, land shortages have been rare, and only about one-third of the estimated area of arable land was under cultivation by 1989 (MAAIF/ ILRI, 1996).

Agricultural produces in Uganda

Uganda's main food crops have been plantains, cassava, sweet potatoes, millet, sorghum, corn, beans, and groundnuts. Major cash crops have been coffee, cotton, tea, and tobacco, although in the 1980s many farmers sold food crops to meet short-term expenses. The production of cotton,

tea, and tobacco virtually collapsed during the late 1970s and early 1980s. In the late 1980s, the government attempted to encourage diversification in commercial agriculture that would lead to a variety of nontraditional exports.

Agricultural/ Farming Practices in Kamuli District

By the 1950s when free land was still plenty in Kamuli District, the people kept large herds of cattle, goats and sheep along with numerous chickens. The animals were used to provide meat, milk and some cash income. Animal husbandry was well integrated with crop production in the district. They added that some of the appropriate agricultural practices have changed over the last 20 years and have in the process had a negative impact on productivity. Fallow periods have been shortened or become non-existent, some new short-term cassava varieties were introduced but most of these cannot stand diseases, some farmers have phased out cattle and goat keeping and many food crops have become cash crops. Production of cotton, which was a great cash earner collapsed, but is slowly being revived. Tobacco (a labor-intensive cash crop) was introduced and competed with food production in terms of labor resource requirements. However, the economic returns to the tobacco farmers in overall terms have remained questionable. Farmers need market information to revive the activities that used to fetch them much income.

Adebua et al, (2002) further argued that the traditional hand hoe is the standard agricultural tool. To date, these tools have remained the standard farming tools. Traditionally finger millet was the main staple food crop variably intercropped with sorghum or pigeon peas. Peas and groundnuts are grown in most areas but simsim and cowpeas are commonly grown in the warmer parts. The author never gave the effects of farmers applying the use of these traditional tools because it

should be noted that these can affect the amount of land that can be cultivated or used for agriculture and this negatively can affect the level of the produces.

To ensure that every household opened land for food production every year, the local administration authorities encouraged people to farm in groups. The land was parceled out and given to each household. They were advised to grow particular famine reserve foods especially maize - a quick growing variety of maize which was collected from each household to be stored in a common food bank (buffer stock) known as 'Ekyagi'. The food from the Ekyagi was distributed to the households during famine. Cotton production was encouraged to generate some household income, which could be used to pay taxes, school fees, and meet other household needs (Adebua et al, 2002).

The effect of the land laws from the central government as well as the traditional laws in line with land were not well aligned these could affect land utilization\ amidst the current land shortage and wrangles that exist in Uganda today . Secondly the author never separate the need for traditional foods and the cash crops within a given area of economy.

2.2 Extent of market information needs of famers

Over the years, deliberate, though ineffective efforts have been made by donors and African countries to bring about agricultural development without much to show for it. Much of the failure can be attributed to the adapted transformation approach to agriculture which is characterized by the introduction of a wide variety of large scale farming and processing technologies. It is however gratifying to note that there is now a shift in emphasis from the big scale transformation approach to the small scale improvement strategy approach which is attuned to African age-long farm practice. Nnamdi(1990)

The failure can also be attributed to the treatment of information delivery as a matter of course by most African governments. As often happens, agricultural information is not integrated with other development programs to address the numerous related problems that face farmers. Information is an essential ingredient in agricultural development programs but Ugandan farmers seldom feel the impact of agricultural innovations either because they have no access to such vital information or because it is poorly disseminated. The information provided is exclusively focused on policy makers, researchers, and those who manage policy decisions with scanty attention paid to the information needs of the targeted beneficiaries of the policy decisions. The non-provision of agricultural information is a key factor that has greatly limited agricultural development in developing countries. Aina (1996)

If the approaches to agricultural development programs are to work, African governments need to take new approaches to information dissemination and management that grow out from a clear understanding of what farmers information needs are.

No one can categorically claim to know all the information needs of farmers especially in an information dependent sector like agriculture where there are new and rather complex problems facing farmers every day. It is safe to assert that the information needs of small scale farmers revolve around the resolution of problems such as pest hazards, weed control, moisture insufficiency, soil fertility, farm credit, labor shortage, soil erosion and so forth. Ozowa,(1990).

The information needs may be grouped into five headings: Agricultural inputs; Extension education; Agricultural technology; Agricultural credit; and Marketing. Modern farm inputs are needed to raise small farm productivity. These inputs may include fertilizers, improved variety of seeds and seedlings, feeds, plant protection chemicals, agricultural machinery, and equipment

and water. An examination of the factors influencing the adoption and continued use of these inputs will show that information dissemination is a very important factor. It is a factor that requires more attention than it now gets.

Extension Education

The general lack of awareness among small scale farmers can be attributed to their high level of illiteracy. This contributes to the low level of adoption of agricultural production technology.Ozowa. (1990).

Extension is a type of education which is functional rather than formal. It is better provided by extension workers whose main task is to convey information in a meaningful form to farmers. One of the ways they do this is by training a group of model farmers with the hope that such farmers come in contact with other farmers. This trickledown effect is particularly necessary because farmers outnumber available extension workers with the present ratio of 1:3000. Ozowa. (1990). With the extent to which farmers need information, extension workers should put in more effort to reach more farmers.

Agricultural Technology

Agriculturaltechnology for the small scale farmer must help minimize the drudgery or irksomeness of farm chores. It should be labor-saving, labor-enhancing and labor-enlarging.The farmer needs information on production technology that involves cultivating, fertilizing, pest control, weeding and harvesting. This sort of information is at the moment being diffused by extension workers, other farmers, government parastatals and agricultural equipment dealers. The impact is yet to be felt Adebua Asaf et al(2007)

Agricultural Credit

Agricultural credit encompasses all loans and advances granted borrowers to finance and service production activities relating to agriculture, fisheries and forestry and also for processing, marketing, storage and distribution of products resulting from these activities. Bakunda (2001)

Small scale farmers are among the potential beneficiaries of agricultural credit in Uganda but because of their low level of literacy they are mostly unaware of existing loan facilities. To reap the benefit of credit, farmers need information relating to sources of loan such as names of lenders, location and types of existing credit sources. They need information on the terms of loans such as the interest rates, loanable amount and mode of repayment.

Information regarding agricultural credit gets to small scale farmers usually through channels such as relations, friends, neighbors, government officials, commercial and credit banks. Grass root organs such as village heads and local government officials are used to diffuse such information because of their personal touch with small scale farmers. Extension agents need to intensify their efforts in educating farmers to increase their level of awareness.Bakunda (2001)

Marketing

All business activities involved in the movement of commodities from production to consumption is marketing. The farmer's market information needs are those that enable him make rational and relevant decisions. Market information services have the function of collecting and processing market data systematically and continuously, and of making it available to market participants in a form relevant to their decision making. Market information needs of small scale farmers include:

- Information on product planning. This is information on what crop and variety to grow at a given season with marketability of such a crop as an important deciding factor.
- Information on current prices.
- Information on forecast of market trends. This type of information assists farmers in planning their market products.
- Information on sales timing. This assists farmers in ensuring that they do not cause a market glut. It enables them to stagger harvesting and quantity for marketing.
- Information on improved marketing practices. It includes information on improved harvesting methods. This information is disseminated by field level extension workers by demonstration on farmer's fields, at local and wholesale markets.
- Information on group marketing. This enables small scale farmers to have organized sales of marketable surplus and bulk transport of produceDual (2001)

Agricultural market information to small scale farmers should be provided by the Ministry of Agriculture through the field level extension workers and by the broadcasting media. A lot still has to be done in this area. Some of those in charge of market information are not trained for the job. Dual (2001)

2.3The role of market information in agricultural development

According to Kintu,(2010), in his report, "Role of market information in the improving investment and stimulating agricultural growth to achieve food security in Eastern Africa" Agricultural market Information does influence both the production, marketing and transaction component of farmer enterprises. This means that MIS has role to play in the stimulating investment growth in the agricultural sector and improving food security.

The types of information include the : Agricultural Inputs(Prices of seeds, source of seed, cost of fertilizers, local of suppliers/ buyers), Extension services (availability of public advisors,), Agricultural technologies (farming practices, harvest systems and methodologies, standards and packaging), produce marketing (bulking , storage, produce associations that are based on farmer service programs, group marketing opportunities), Agricultural Credits/Crop insurance (terms and conditions, appropriate packages), Transaction data :- Buying and Selling (farm gate prices, off lorry prices, average spot sale prices, distances from markets, mileages costs, loading and offloading prices, assemble market prices).

According to FIT Uganda market information is defined as a 'business resource that contributes to know- how and increases the chances for the businesses to manage prevailing situations and plan for future market opportunities'. In principle the definition assumes that any one in need of market information seeks a resource to influence his or her business decision.

Which means that if we are discussing roles of market information in stimulating agricultural growth, we are stating that, farming is a business not a survival strategy. For a couple of decades, development support programs have preached farming a tool for food security not wealth creation. This has influenced the approach many small holders have against production.

The role of Market information in stimulating investments in agricultural sector can be derived from the following: Aiding farmers in price selection and choice based on comparison with their cost of production, better negotiations, increasing the bargaining power of the producer, helping the farmers to make a decision on storage verse immediate sell, historical prices trends that reveal patterns that inform farmer of future profitability.

Market Information

Center for Agriculture and Rural Cooperation (2001), points out that the effectiveness of managing market information depends on the availability of permanent structures and the means to gather, process and disseminate the information to farmers. Also the structure's effectiveness largely depend on the availability of equipment such as telephones, fax machines, newsletters, e-mail facilities and the ability to use media (rural radio, local newspapers).

It is also argued that market information is the means to access input information, product information, market sources, and ability for farmers to organize market forums where farmers sell their products ranging from local, national and where possible international markets. This can be done through establishment of better interaction between farmers and other operators. These could be Farmer Forum Organizations (FFO) that can act as meeting places for commercial transactions. However, this can largely depend on the quality of information from the various partners and conviction of benefit from such exchange.

The characteristics of good information are relevance, timeliness, accuracy, cost-effectiveness, reliability, usability, exhaustiveness, and aggregation level. Information is relevant if it leads to improved decision making. It might also be relevant if it reaffirms a previous decision. If it does not have anything to do with your problem, it is irrelevant. For example, information about the weather conditions in Paris in January is relevant if you are considering a visit to Paris in January. Otherwise, the information is not relevant. Nnamdi (1991)

Timeliness refers to the accuracy of the information presented to the users. Currency of data or information is the time gap between the occurrences of an event in the field until its presentation to the user (decision maker). When this amount of time is very short, we describe the information system as a real-time system.Nnamdi (1991)

Accuracy is measured by comparing the data to actualevents. The importance of accurate data varies with the type of decisions that need to be made. Payroll information must be exact. Approximations simply will not suffice. However, a general estimate of how much staff time was devoted to a particular activity may be all that is neededNnamdi (1991).

A case study in India under the program "Empowering small scale rural Indian farmers with information(1998), it is argued that in surge of mobile phones usage in developing countries has provided an opportunity for innovative projects leverage this new distribution channel- Reuters, Nokia, Esoko/ Trade net, manobi Ag Risk, internet kiosks and others have demonstrated the impact of cell phones in reducing prices variations and creating equilibrium among markets Open access to information promotes sustainable progress. It influences farmer participation, decision making, and the knowledge base, facilitates information transfer among farmer organizations and improves knowledge sharing and strengthens information management systems capacity. Whereas, this argument is true, the researcher finds areas of interest where information has not played its deliberate role.

NAADS task force (2004), and joint donor groups, state that information involves identifying gender related disaggregated information needs and sources for the different farmer types, testing and developing appropriate information and communication methodologies, managing the packaging and re-packaging of information into a range of formats, piloting use of low cost

technologies in information dissemination, coordinating information dissemination with other stakeholders, identifying capacity building needs, monitoring and evaluating information impacts and knowledge outcomes.

Cameroon (2001), also in her seminar report compiled by technical center for agriculture and rural cooperation (CTA) information and communication management strategies in federation of farmers organizations observed that in the current context of globalization and the deregulation of trade, accompanied by the growth of new information and communication technologies (ICTS), farmer organizations are finding themselves faced with new tasks and responsibilities at a time of rapid political, economic and social change. It is essential that they improve the flow and exchange of information in their organizational structures, between them and other agencies and with grass root organizations.

This apparently raises a concern whether while the NAADS program has utilized the existing structure to the advantage of the farmer in Kamuli district has had any impact on farmers attitude to better their practices by receiving well directed messages timely and appropriate information on market availability, need for increased participation, managing their records which will help them make correct decisions and forecasts.

Information about market availability is very crucial for a commercial farming because the aim is to increase a farmer's income, therefore, where to sell, the price and what is on demand influences what to plan to plant and decision on enterprises to undertake and forecast for future which assists the farmer with knowledge and information and that is empowerment. Although, we appreciate the Agricultural price fluctuations, it is important for a farmer to be availed with timely and appropriate information on market in order to make proper decisions on where to go in of selling his/her produce or products. NAADS task force (2004).

Cameroon (2001), shows that the management of market information of cereals require permanent structure, with ability and means to gather process and disseminate the information to farmers and other relevant operators. The structure can be a federation of farmer organization or a support organization. The effectiveness of such a structure depends largely on the availability of equipment such as telephones, fax machines, newsletters and email facilities and the ability to use the media (rural radio, local newspaper.

Aqua report (1998), on the role of information technology agriculture argued that if the relevant and right information in right time is provided, it can help Agriculture a lot. It helps to take action, prepare strategies for next season or year, speculate the market changes and avoid unfavorable circumstances. It adds that there are many ways in which information technology can be used to exchange the information rather effective communication like information kiosks which provide not only the basic services like email, helps in education, health services Agriculture and Irrigation, online trading, community services, expert systems which help in determining marketing alternatives, optimal strategies for producers, integrated crop management systems for different crops, farm level intelligent decision support systems developed.

Market information includes structural information about changes in the marketing chain, market forecasts (supply & demand) changes to product specifications and quality matters, together with conjectural information about present and future prices and procurement intentions with conjectural information about present and future prices and procurement intentions.

When the economic context of Uganda is critically examined, Uganda is naturally gifted with a variety of natural resources, including fertile arable land, natural forests, wetlands, reliable and

regular rainfall, mineral deposits and climatic conditions which favour the growth of a variety of crops ranging from temperate to tropical crops. The economy has great potential, and it poised for rapid economic growth and development especially with the discovery of commercially viable oil reserves. However, chronic political instability and erratic economic planning perpetuates persistent economic decline that has left Uganda among the world's poorest and least-developed countries, with a human development index ranking of 143rd out of 169 (UNDP). Nonetheless, Uganda has recorded considerably high economic growth averaging over 7% per annum for almost a decade MFPED, (2007/08) thus reducing poverty levels from over 60% to 31.1% (MFPED, 2010:13)

According to the National Planning Authority (NPA), the poor performance of the agricultural sector has been as a result of a weak policy, legal and regulatory framework. The policies have been developed for the sector but the implementation has not been consistent with specific government programs which they say has led to the uncoordinated interventions. The sector faces high risks and a huge cost of investment to transform agriculture into commercial production. The capital requirements are way beyond the capacity of the communities involved in agriculture. The NPA also raises the lack of enough human resource, extension staff, limited availability of market information and improved seeds, irrigation equipment and machines for planting and harvesting.

The National Development Plan (NDP) has proposed to increase agricultural production by improving technology in the sector, ensuring delivery of advisory services, controlling diseases and increase of water supply for irrigation, livestock and aquaculture and encouraging effective land use. However this remains a mere wish as budget allocation to the sector continues to

decrease. For instance the 2011/12 national budget allocation to agriculture is a mere 4.5% of the national budget which is still far below the 10% commitment of the Maputo declaration.

According to the National Planning Authority (NPA), an increase in budget resource allocation can significantly reduce the number of people below the poverty line. According to research by IFPR, a growth of 6% in the agriculture sector would result into reduction of the national poverty headcount level from 31.1% in 2005 to 17.9 % by 2015. This would be well below the 28% Millennium Development Goal target and the absolute number of poor persons in Uganda would decline from 8.4 million in 2005 to 6.9 million in 2015. Furthermore, although investment in agriculture can operate high economic and social returns and enhance economic diversification and social development, Uganda's agriculture remains largely traditional and subsistence in nature.

At the East African sub regional level, the five countries, Burundi, Kenya, Rwanda, Tanzania and Uganda officially integrated their markets under the common market protocol beginning July 2010. The countries committed to co-operate and coordinate in many areas including financial sector policy, harmonization of tax policies and laws, transport policy, environment management, statistics, research and technological development, intellectual property rights, industrial development and agriculture and food security. With such developments, a lot of effort needs to be put into preparing Uganda's smallholder farmers to adapt and deal effectively with the changing economic environment.

Uganda, under the East African Community, signed the interim Economic Partnership Agreements, (EPAs) in November 2007; however negotiations for a comprehensive EPA are ongoing. One of the major objectives of the EPAs is to stimulate trade between EU and EAC,

promote sustainable development and economic growth. Agricultural trade issues in the EPA negotiations are covered in the market access offers negotiated in the interim EPA. In the interim EPA, the EAC market access offer consists of a commitment to open its market to goods from the EU including farm products such as; meat products, fish products; honey, milk and milk products, tomatoes and vegetables, mushrooms and roots, nuts; fruits; seed cereals; and animal food.

Most of these products have been at 25% in terms of tariffs; therefore the reduction to 0% is quite drastic given the fact that these are products produced by the small scale farmers (SSF) and the little time available and limited government commitment to organize the smallholders producing them for competition with EU products. This extensive liberalization will expose Uganda's agricultural and industrial producers to unfair and harsh competition. Worse still, EPAs involve tariff elimination which is irreversible.Economic Partnership Agreements (2007)

Markets are generally available for most commodities that are produced by households. However, fluctuations in commodity prices, limited access to post harvest handling and value addition techniques, access to timely market information, poor access to and adoption of new technologies, inadequate marketing capacity by small scale farmers, limited access to affordable agricultural credit, lack of bargaining power and collective voice, poor and inadequate infrastructure, counterfeit inputs, and policy related challenges among others, pose enormous market access challenges for smallholder farmers.Uganda National Farmers' Association Repot (1999)

2.4Challenges faced by farmers in accessing market information

Rural farmers account for the greater part of the population of any developing country such as Nigeria. Governments of developing countries have a major responsibility of ensuring that there is adequate rural development in their various communities and local governments which would lead to effective and efficient agricultural systems that will not only supply food and animal protein but also foster the utilization of natural resources in a sustainable manner Munyua(2000).

When the rural farmers lack access to knowledge and information that would help them achieve maximum agricultural yield, they are not only groped in the dark but are driven to the urban centers in search of formal employment, as the only option for survival Munyua(2000).

Blait(1996) pointed out that the least expensive input for improved rural agricultural development is adequate access to knowledge and information in areas of new agricultural technologies, early warning systems (drought, pests, diseases etc), improved seedlings, fertilizer, credit, market prices etc. There have been short-comings of traditional print and library based methods of providing such agricultural information to rural farmers who are generally illiterate and relatively remote from formal sources of information (e.g. extension stations, libraries). Van and Fortier, (2000).

Aina (2007) also, was of the opinion that farmers would benefit from global information, if information centers, are cited in rural areas complete with all information and communication gadgets.Rural farmers are noted to face food shortages, probably due to some constraints that lead to lack of access to timely and up-to-date information which would have enabled them to achieve optimal yield from their farmlands. Such information is highly desired by these farmers

and can only be made available to them via extension workers, community libraries, state and local government agricultural agencies. In this modern day of information technology, telecenters provide the rural farmers with prompt and reliable information about what is happening in areas of improved seedlings, better methods of cultivation and fertilizer application, pest and weed control/eradication, new advances in livestock production and disease control etc. Where rural farmers are faced with constraints in accessing agricultural information, traditional media such as rural radiois used in delivering agricultural messages to rural farmers. Other ways of delivering these messages or information to the rural farmers include print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations (Munyua, 2000).

The lack of access to basic agricultural knowledge and information by rural farmers has made these farmers to stick to their old traditional methods of farming system and animal husbandry practice, hence resulting in poor crop and livestock productivity. Information and knowledge are very vital in agricultural development of any community and where they are poorly disseminated as a result of certain constraints, the community's agricultural development becomes highly impeded.Van and Fortier, (2000).

Product market information

CEEWA-UGANDA (The Council for Economic Empowerment for Women of Africa- Uganda Chapter report November, (2007) describes access to input information as the only way farmers could make informed decisions on what to plant and where these inputs exists and their prices in time. Farmer inputs range from improved seeds for crop production, animal breeds for both dairy

and beef, poultry birds for layers and meat and a wide range of fertilizers and herbicides, fungicides, acharicides for animal health, better feeds also for animals and poultry.

Balunde, (2008), in one of the review meetings after a survey said under the current global trend for small holder farmers, they are confronted with the need to acquire sufficient knowledge and information on markets in order to be able to respond appropriately in producing the right type of commodity that fetches premium prices and in the right quality and marketable volume. Farmers must therefore be able to compete, not just with their neighbors but also with the rest of the global produce.

African Communication Project - summary report (1995), says that the creation of alliances assumes that there is effective communication along the chain, within as well as between levels and the most important messages include accessibility and accuracy of market information. Different players will require different items of information and must also be sufficiently able to interpret the message to make use of it. Information which is not understood, relevant or timely has no value to the recipient.

Therefore, the need to evaluate the means and communication on market information is employed to get to the farmer not as merely sender to receiver event but a process that is aimed at creating mutual understanding through accurate, consistent and timely information for change to facilitate commercial farming in rural communities. It is clear that most often than not, do public structures and through their public Officers take follow-up activities seriously and evaluate programs most especially communication programs that are desired to change.Najib. (2005).

Further research on success of communication to rural farmers reveal that it is a support tool intended to coordinate use of different communication methods for the purpose of focusing attention on and offering a solution to a specific problemNajib.(2005). He also argues that while planning a communication support to farmers geared towards change for good, innovations in agriculture development the following media resources need to target radio stations, cinema halls, printed materials, mobile units, indigenous media, drama groups, meeting halls, stadiums, markets and fair and festivals.

Market information forums

A seminar report (2001), on Community Technical Advice encourages exchange visits between farmers either within the same FFOs or between different FFOs. Visits could also be organizedbetween farmers and researchers. These visits constitute a powerful means of training and information exchange and are used as such by most FFOs. The acquisition of knowledge and changes in attitude are most obvious outcomes of these visits.

Those scholars like Turral who subscribe to the farmers Organization and social communication system argue that it includes the culture of different groups, relationships among group members, and the individual or collective interests of group members.Seminar report (2001)

Recognizing time factor as crucial in delivering market information especially to farmers determines the farmer's decision when to plant, the right time rains since most of the farmers depend on natural seasons because it is important to provide information at the right time and using the most appropriate channel. FAO Farm Management Data and Information Systems (2007**),** stated in its report that only if rural communities are provided with more timely and

better quality information and the skills to use it to their advantage, will they be able to improve their livelihoods.

Also Aqua report (2006), on the role of information technology agriculture argued that if the relevant and right information in right time is provided, it can help Agriculture a lot. It helps to take action, prepare strategies for next season or year, speculate the market changes and avoid unfavorable circumstances. It adds that there are many ways in which information technology can be used to exchange the information rather effective communication like information kiosks which provide not only the basic services like email, helps in education, health services, Agriculture and Irrigation, online trading, community services, expert systems which help in determining marketing alternatives, optimal strategies for producers, integrated crop management systems for different crops, farm level intelligent decision support systems developed.

In addition to the above, when the technological context of Uganda is examined, The biggest challenge of agriculture in Uganda is the mindset of the majority of the farmers who practice agriculture as a pastime venture rather than as a business. Agriculture remains concentrated in the hands of smallholder rural farmer majority of whom are illiterate and technology averse. Experience and observations reveal that the poor road infrastructure, especially feeder and community roads, provide challenge for transportation of produce to the market hence c6ontributing to low farm gate prices to farmers.Aqua report (2006),

Electronic and print media is critical in bridging the information gap between the agriculture practitioners, policy makers and the critical services providers. Uganda is endowed with reasonably accessible information technologies and innovations such as FM radios, mobile and

telephone which can be exploited productively to reach the farmer with such information. Such approaches have already been piloted in other countries mainly using radio, cell phone, short message service (SMS), voicemail, internet). Mugenda (1999)

There is increased coverage of agriculture news and features by the Ugandan print media particularly, the New Vision, the Daily Monitor, Bukedde, Eddoboozi and other dailies. However, the coverage is in English for widely read dailies and the vernacular papers like Eddoboozi is not widely circulated yet the majority of the grassroots farmers in Uganda cannot read the language. The beneficiaries are mainly urban and elite farmers who are by far fewer in numbers. Full-time farmers who are based in villages do barely access information resulting from increased reporting on agriculture in the print media and more so they cannot afford the price of the newspaper to be able to read the "good" agriculture stories. Interactions with farmer groups also revealed that one of the challenges encountered is lack of market research and information that can help the farmers make informed marketing decisions. Partnerships ought to be built with the private sector to harness these technologies for the benefit of the farmers. Mugenda (1999)

In spite of the rhetoric on modernization of agriculture, it is still rain-fed and irrigation has not been adopted in the agricultural industry in Uganda. Overall, less than 1% of the Uganda's farming population uses irrigation on their farms and about 5% of the commercial farmers use irrigation. Investing in irrigation technologies would certainly increase productivity to foster food security and possibly enhance agricultural profitability. Agro processing remains low in Uganda partly due to the lack of improved processing technologies, lack of awareness on the alternative uses and lack of technical know-how on processing. Traditional practices in Post-Harvest Handling (PHH) and malpractices like drying on bare ground, as practiced by most

smallholder farmers, often compromises product quality and falls short of the food safety standards required in regional or international markets. Bakunda (1990)

In Uganda post-harvest handling commonly lies in individual hands. Small scale farmers seldom work together in activities that include cleaning, sorting and packaging. Most of the efforts small scale farmers put into PHH are geared towards home consumption. This affects the quality of the end products and negatively impacts on the demand for agricultural products from Uganda in international markets.Bakunda (1990)

Value addition is picking momentum among Ugandan small scale farmers after it has been noticed as the most likely way farmers will be able to access markets at the international and local level. Value addition occurs in tuber crops, fruits, vegetables and cash crops like coffee, rice and tea. However this has not grown to a point of being able to compete with imports because it is practiced at a very low level and farmers lack information about it. A research review study done by Geoffrey Bakunda on "The Impact of a Liberalized Trade Regime on the Potential for Agricultural Value Addition in Uganda" states that liberalization of the agricultural trade regime in Uganda has resulted in phenomenal growth in imports of agricultural products particularly the processed ones. According to the Agricultural Sector Development Strategy and Investment Plan (AS-DSIP) 2010/11-2014/15, the proportion of Uganda's processed agricultural commodities accounts for not more than 5%.Bakunda (1990)

According to the National Bio-technology and Bio-safety policy for Uganda, Bio-technology has an immense potential of improving food and nutrition security, production of medicine and diagnostics, and improvement of environmental protection and sustainability. Bio-technology involves transferring useful gene from one organism to another. This has been done in cases of

pest control and the NARL at Kawanda is developing a product of banana with nutrients in a balanced diet since the Banana is the staple food for a big population in Uganda. Bio-technology, however poses a disadvantage to small scale farmers where by such improved seeds are very expensive and out of reach for farmers. Furthermore, supply of genetically modified seed is done through very few research bodies which control the prices yet most of seeds cannot be reproduced. The seed production and availability is out of small scale farmers' control. Given the inadequacies in the extension system, the small scale farmers do not access the necessary information on how to use the improved seed which eventually affects the germination and performance of the seed leading to big agricultural losses.Biotechnology policy report (2001)

Uganda is signatory and party to both the convention and biological diversity (CBD), 1992, and the Cartagena Protocol on Bio-safety (CPB) 2000. These international legal binding instruments among others provide for access to and transfer of biotechnology that is relevant to the conservation and sustainable use of biological diversity. In the draft seed policy issues of biotechnology,GMOs have not been adequately addressed. The policy provides for exclusive rights for plant breeders to withhold from other parties their consent to make use, offer for sale, or import the plant variety that they develop. However, it suppresses the small scale farmers who are 80% of the informal seed sector. The same policy talks about controlling GMOs but it does not address regulatory measures like control quality, purity, availability and accessibility. All this will be made possible if farmers are availed with development information and facilitated to attend market information forums.

Market information sources

Fraser and Villet, (1994), advocates for traditional and popular media such as folk-theatre, puppet shows, popular poetry, as well as rural press linked to literacy programs and audio visual materials.He affirms that this can be highly effective channels for disseminating development information for stimulating community action.

Farmer' Organizations and Social Communication system (2004), also argue that to enable farmers to direct their activities according to the requirements of markets, and adapt them to the current economic and regulatory context, there is need to build permanent institutions. At the same time the institution must be able to aid farmers to improve their managerial and organizational capacity (to make better production and investment choices), and to make them more competitive on the market. It must also improve the know-how of farmers beyond training provided by specialized institutions. To this end, farmers' associations should have data banks on agro-climatic, economic, technical, commercial, and regulatory conditions, constantly updated and easily accessible to farmers and technicians who advise them. Their contents must relate to local agricultural activity and must be widely disseminated, using all the verbal, written and audiovisual means currently available, and communicated in a way that responds to the requirements of each category of farmers.

Community Technical Advice report(2001), also highlights that several measures that could help manage information and communication were proposed taking into account the individual needs of each member. They expressed the wish that when (FFOs) organize literacy programs , illiterate people should be included in the program planning and programs should aim at

including illiterate people in information system (through the development of information dissemination via radio cassettes, pictures etc).

Technical Centre for Agricultural and rural cooperation ACP-EU (1998), also noted that in managing processes there are three essential tools: information, knowledge and technology. They have to be disseminated, exchanged broken down, discussed and debated and adapted at faster paces. For this to happen stakeholders in rural development need appropriate communication tools. Here radio is the leading medium since it relates better than other media to the cultural social and linguistic realities of ACP countries.

Uganda National Farmer's Association- Agriculture Marketing Farmer's Book (1999), also emphasizes the idea that it is necessary for a farmer to know when he or she can sell a product at a maximum profit. It is also important for buyers to know your farm or where you operate from. Before you engage in any Agricultural commercial activity, you need demand for your produce, location of demand and the best time to sell. Product promotion information consist of marketing activities that give the producer chance to communicate with potential customers and promotion is done so that you can be able to reach your targeted market.

2.5 Conclusion

For easy access and effective utilization of agricultural information in this digital age, there is need for establishment of information centers in all rural communities in Uganda. Such information centers would be able to provide the rural farmers the desired agricultural information in a format that would be comprehensible to them, taking into cognizance the prevailing high illiteracy rate, cultural differences and limited technology (Aina, 2007). Uganda rural farmers are still backward when it comes to latest developments in various areas of farming

practices, e.g. telecommunication infrastructures. Telecommunications infrastructure is a major aspect of information dissemination in the rural areas. According to Griffith and Smith (1994), telecommunications infrastructure connects homes, businesses, schools, hospitals, libraries to each other and to vast array of electronic information resources. Government should work towards the development of telecommunications infrastructure in all the rural areas (information centers) in Uganda so as to help the rural farmers' access agricultural information for optimal farm production. Information centers in every rural community should be equipped with up to date information and communication gadgets, such as computers with internet access, local area and wide area networks, radio and television sets, telephones and fax machines, multimedia projectors, video and audio recorders (Griffith and Smith, 1994).

The Government should also consider the need for rural communities to have mini community libraries in their areas. By so doing, such community libraries would be able to engage the services of qualified librarians who would be in position to liaise with the staff of information Centres in their area so as to help in capturing relevant agricultural information from Internet, ministries of agriculture and other agro allied establishments. Such captured information would then be repackaged in a format that the rural farmers would understand and put into practice for better farming operations. For effective dissemination of agricultural information in rural communities by extension staff, there is need for construction of good access roads that would lead to all the remote rural communities in the country.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter dealt with the methods and techniques used in this investigation. Specifically, the chapter is involves; the research design- which tackles the overall outlook of the investigation, area of study, study population, sample size, sampling procedure, data collection methods and instruments, data quality control, data analysis and presentation, constraints faced and the ethical considerations that were observed during data collection.

3.2 Research Design

The study was based on a case study research design focusing on the assessment of the contributions of market information in agricultural development in Namasagali sub county in Kamuli District under the NAADS program. Abd & Mohd (2003) noted that a case study design is an empirical investigation to a phenomenon in its natural setting especially when the issues around that phenomenon are not clearly defined.

The design was chosen because it could help to discuss the results basing on the theories surrounding the study under investigation. Secondly, it assisted in reflecting to the true picture of issues under investigation. Therefore, the design was significant in getting information from the local residents of Kamuli district in Namasagali Sub County.

On the same note, Fisher (2007) noted that a case study enable the researcher to give a holistic account of the subject of the research and also helps to focus on the interrelationships between all the factors such as people, groups and policies that make up the case studies.

The study adopted both qualitative and quantitative data collection approach in order to obtain representative information about the respondents. The quantitative technique was used because it allows stating the problem under investigation in a specific and defined way; it helps to clearly define both dependent as well as independent variables, it provides a platform of testing the set research hypotheses among other advantages.

The qualitative techniques was used to get views from the respondents as Balsley (1970) said that this techniques helps to interact with the respondents and it provides flexibility in asking the respondents since it allows probing information that is useful to the study.

3.3 Area of the study

The study was conducted in Kamuli district in the Sub county of Namasagali. Kamuli District is approximately 144 kilometers East of Kampala City. Kamuli district is bordered by Kaliro, Kayunga, Jinja, Soroti and Iganga districts. The study involved one Sub county of Namasagali. This Sub County was chosen due to the fact that it was one of the first sub counties to benefit from NAADS program in Kamuli District and it is engaging in agricultural production as a way of eradicating poverty. It was therefore thought to have information that was needed for this study.This study reached out to 2 parishes and 9 villages.

3.4 Population of the Study

A population is a total sum of all units of interest or the universe. In this study the population referred to human beings though it could as well refer to human beings and they were 100 in total.

3.5 Sample Size and Sampling procedure

A total of 100 respondents were included in the study. 45 were female and 45 were males. These were selected using a Simple Random Sampling procedure. A Simple Random Sample is selected in such a manner that all members of the population have an equal chance of being selected. The random sample was carried out using the lottery method. Each members name wastransferred from the list putting it on a piece of paper, the pieces of papers were place in a container and thoroughly mixed, the required numbers were selected by the research assistants without looking and the 90 names selected were the simple random samples.

10 people acted and key informants and these included; the District Agricultural Officer, District NAADS Coordinator, Sub County NAADS Coordinator, District Production Officer, Chairman Farmers' Forum L.C 1 Chairpersons and the Sub county Agricultural Extension Worker.Purposive/Judgmental sample was used. Purposive Sample is a sample selected because the individuals have special qualifications of some sort or because of prior evidence of representativeness. Units from pre- specified group are sought out and sampled at times due to their "privileged" positions by the virtue of their offices.

Table 1: Distribution of study respondents

Data collection tool	**Status**	**Number**
Interview guide	**Key Informants**	
	District NAADS Coordinator	1
	Sub county Agricultural extension	1
	LC I chairmen	4
	District Agricultural Officer	1

	Sub county NAADS Coordinator District production officer Chairman farmers forum **Sub-total**	1 1 1 **10**
Questionnaire guide	(45 Women and 45 men farmers) **Sub-total**	90
Grand Total		**100**

Source: Primary Data (2013

3.5 (a) Sampling procedure

The two parishes of Bwiiza and Kasozi acted as a stratum and using the proportionate stratified sampling technique, each village formed a stratum. Maximum representation was ensured from the villages in the two parishes. A proportionate random sample was selected so that certain characteristics are represented in the sample in the same proportion as they occur in the population. Stratified random sample involved sampling of each stratum separately. This increased precision, reduced time, effort and cost of allowing smaller sample sizes for a given level of precision.

Cluster sampling was used to obtain local residents from the different villages ofButaswa, Bwiiza, Bulondo, Busuuyi, Bunono, Buwaibale, Bukafika, Bulagala, Butadhiba among others. Cluster sampling was used by making the population congregate into clusters. Villages were grouped as sampling units rather than individuals.

Ellion et al, (2009) noted that selecting respondents on simple random basis helps to include all the participants in the study and it is simple to be applied during the study. On the other hand the

key informants were selected using purposive sampling method, this method has been chosen because Adler & Clerk (2010) revealed this technique having the ability to assist in obtaining reliable information due to the reliability of the sources, it creates homogeneity for the respondents included in the study among other advantages.

3.6 Data collection methods and Instruments

Both primary and secondary sources of data were used for this study, thus the study was based on the questionnaire and interview methods as ways of data from the field.

3.6.1 Interview

The study was based on formal interviews which were conducted physically using an interview guide administered to NAADS coordinator, District Agricultural officer and sub county Agricultural extension worker of the four Sub counties. The interviews were used because according to Darling, (2000) it allows the researcher to get the degree for the existence of phenomena especially if probing is done. Secondly, it allows the respondent to have a free interaction with the researcher leading to a higher response rate for the study.

According to Cagarn (2000) an interview allows to have standardized questions which increases the response rate from the respondents and it is time saving. Interviews were used to allow a free interaction between the researcher and the respondents.

3.6.2 Questionnaires

A close-ended questionnaire was developed based on a “yes” and “no” and Agree, disagree or strongly disagree scale model. According to Kothari, (2008) this scale method makes the respondent to take little time in making a response to the question. The questionnaire was based

on sections composed of objectives for the study sought to elicit information from the respondents.

The questionnaire was used to obtain quantitative results from the information given by the respondents. Claire, Craig & Ashraf (2006) noted that interviews help in achieving high response rates from the respondents with the allowance for more detailed set questions to be asked to the respondents. This led to accumulation of information for the study. The research assistants translated the questionnaire into Lusoga for easy understanding by the respondents.

3.6.3 Documentary Review

Documents ranging from formal reports, administrative records, policy documents, evaluation reports, and progress journal Books, among others were used to get enough information for this research study.

Documentary review method helped to supplement on the primary data obtained from the key informants and the beneficiaries and secondly, it helped in getting a clear picture of what is happening in the four sub counties as far as Market information contribution in agricultural development is concerned.

3.7 Data Quality Control

3.7.1 Reliability and Validity.

Reliability refers to the statistical method used for the evaluation of the importance of a research procedure and it may also refer to results reproduction across different studies Stack (2008) and it looks at the reliability of a result across a series of observations or studies. Therefore, content and validity of instruments for this study was determined by a test-retest stability approach, before collecting data.

On the other hand, Validity is the extent to which a specific measurement provides data that relates to commonly accepted meanings of a particular concept Allen & Earl (2010). This helped to make the research tools used in this study valid.

3.7.2 Pre-testing of data tools

Pre-testing of questionnaires was done with 15 randomly selected farmers from the Sub counties of Butansi within Kamuli district. This assisted in testing the validity and reliability of the questions, editing of the questionnaire items was done to suit the study.

Thanos and Ara (2010) noted that questionnaires need to be piloted and this can take some time given the subsequent work of editing them to suite the study population. However, they said that this instrument can elicit numerous responses from the respondent and it also gives options to choose on.

3.7.3 Training of research assistants

Before data collection, 4 research assistants were trained to assist during data collection. Detailed information was given to them on how to handle the respondents and data management. These people were fluent in the local languages to ease communication among the respondents. Observation of research ethical ethics were emphasized and upheld in the data collection process by the research assistant for the good of the respondents.

3.8 Data Analysis and Presentation

This type of data was edited, coded, classified and tabulated with the statistical package for social scientists (SPSS) to generate tables. Microsoft word 2003 version was also used to generate figures for the data.

Descriptive statistics in form of frequencies, percentages, were computed to describe the respondents' perceptions regarding the variables of interest in the study. According to Mugenda and Mugenda (1999), descriptive statistics enable a researcher to meaningfully describe a distribution of scores using a few statistics.

Qualitative data from the interviews was dealt with using thematic content analysis and field notes were categorized according to the study themes and sub-themes and these were developed according to the study objectives.

The information given by the key informants was presented as direct speeches to show the strength of the response in relation to the topic.

The presentation of the findings in the form of graphs and tables helped to give a description of the data obtained from the field to ascertain what is on the ground in relation to the set objectives. This also helped to clearly show the results in presentable way to every reader.

3.9 Ethical Considerations

Confidentiality was ensured in collecting and analyzing the data. Consent was sought from all participants, who were to participate in the research on humble request by the research team.

Culture was respected. For example the dress code, manner of speech, language took into consideration the Soga culture. No views were sought from persons below 18 (eighteen) years. All works of other researchers/writers were recognized and proper citation and referencing has been made in this regard.

Citation of views of interviewees ensured anonymity of the respondent's names, and only names of place, village, sex or position of respondent and not personal names were mentioned.

3.10 Limitations and delimitation of the study

The researcher had a problem of limited resources (both monetary and non-monetary) for the study. Monetary constraints were particularly because the research had to foot the entire budget for this study, since no complementary donation was obtained. However, the researcher avoided or averted these anticipated resource constraints through proper planning, consciousness of unnecessary spending and resource wastage.

Due to the complexity of the topic, some intended respondents shunned answering some questions. Many respondents expected to be rewarded in monetary terms for their participation. However, the researcher skillfully avoided or averted the effects of this anticipated constraints, given the thorough training and community/ people skills obtained as a community development worker and knowledge of the local language and socio-economic set-ups of the intended respondents.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

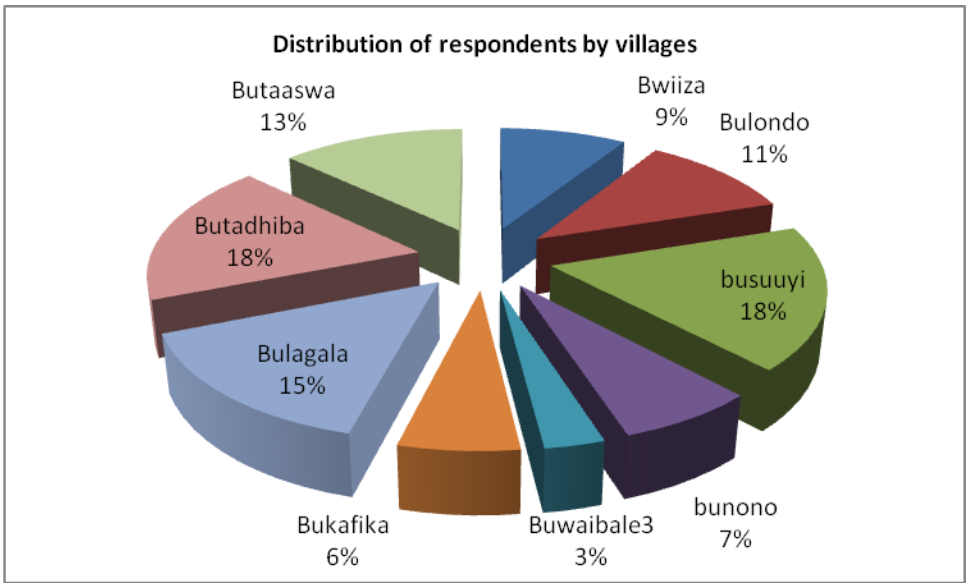
4.1 Introduction

This chapter deals with the analysis, presentation, and discussion of findings. The study sought to examine the Contribution of Market Information in agriculture development under National Agricultural Advisory Services (NAADS) Program in Kamuli District since 2008-2010. The following Objectives guided the researcher, To establishthe extent of market information needs of farmers,identify the role of market information in agriculture development, , and to determine the challenges farmers face in accessing market information and devise mechanisms to overcome the challenges. The chapter begins with brief description of the socio-demographic characteristics of the respondents.

4.2 Demographic Information for the respondents

The respondents were asked questions about their area/village of residence marital status, age, income, types of crops and animal they have. Different responses were obtained and they are presented below from figure 1 to figure 11. The information about the demographic characteristics of the respondents though not part of the objectives of this study, was considered vital to give the true picture about the study participants and this helps the reader of this work to know the social and economic attributes of the residents of Namasagali Sub County in relation to agricultural production. Figure 2 below shows the demographic distribution of respondents by villages. The villages include; Butaswa, Bwiiza, Bulondo, Busuuyi, Bunono, Buwaibale, bukafika,Bulagala and Butadhiba.

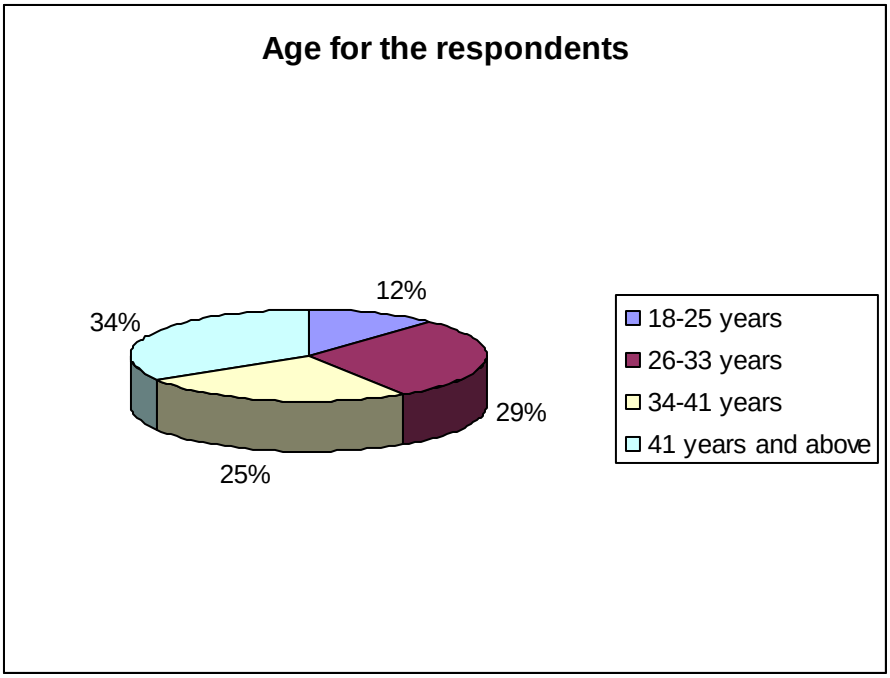
Figure 2: Distribution of the Respondents by Village



Source: Primary Data (2013)

Based on this figure, majority of the respondents were obtained from Busuuyii and Butadhiba villages 18% and the least of the respondents were from Buwaibale village. This implies that the study covered all the villages that make up Namasagali Sub County.Therefore, the information given in this study is a representation of farmers in this sub county. Secondly this finding signifies that the sampling techniques that were adopted helped the researcher to obtain information from all the villages that make up Namasagali sub county.

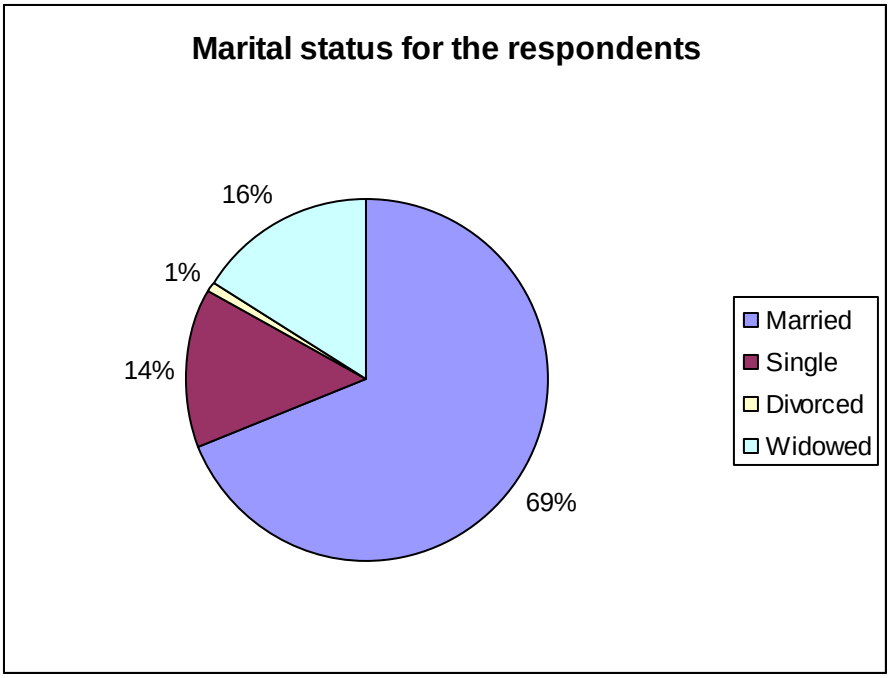
Figure 3: Age for the respondents



Source: Primary Data (2013)

Figure 3 above shows age of the different respondents. Majority of the respondents were aged 41 years and above with 34%, followed by 29% for those who were aged between 26-33 and the least of the respondents were between 18-25 years. The results and the differences in age imply that the respondents were energetic and could get involved in agricultural activities. Secondly, age implies that the respondents' livelihood is dependent on agriculture and this can be used to explain their way and style of life. Age also signifies differences in the understanding or interpretation of agricultural related information by these respondents.

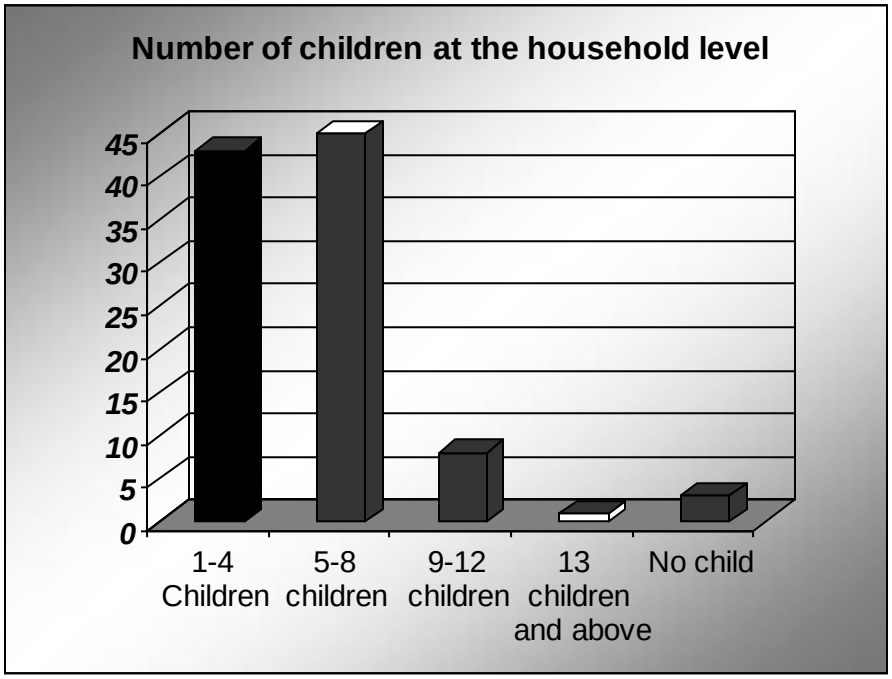
Figure 4: Marital status for the respondents



Source: Primary Data (2013)

Figure 4 above shows the marital status of respondents. Information from this figure depicts that majority of the respondents, 69%were married, 16% had lost their partners, and the least of the respondents had separated/ divorced with their spouses. This finding insinuates that Agricultural production is mainly done by the married people though others who are not, also carry out agriculture. The married people can share agricultural related information with their spouses and they apply it on their farms.

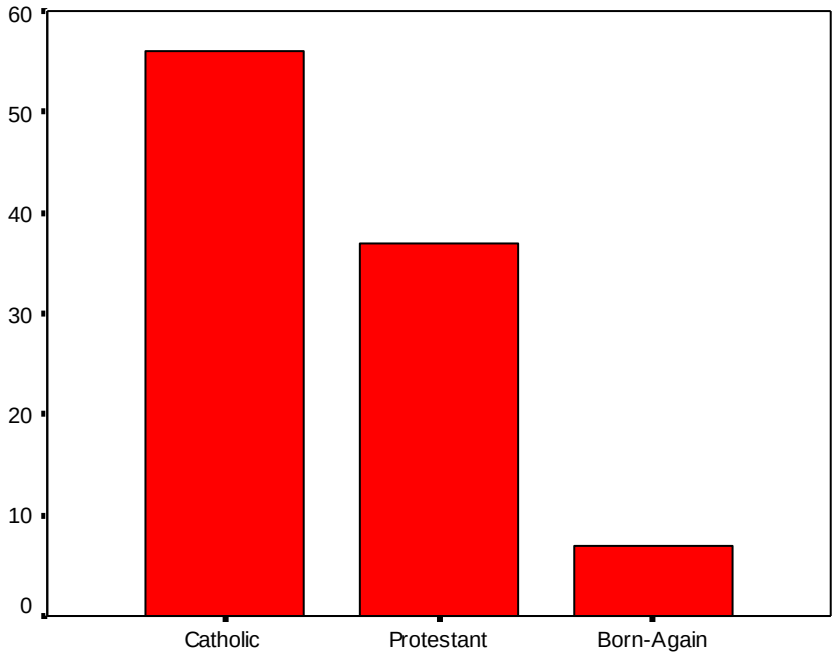
Figure 5: Number of children at the household level



Source: Primary Data (2013)

Figure 5 above shows the number of children at household level.The biggest percentage of respondents 45.0% had 5-8 children, and the least of the respondents were having 13 children and above. This depicts that there is some source of labor in Namasagali Sub County given by the children to carry out different agricultural practices. Children could give a hand where necessary to ensure that agricultural production is sustained. Secondly the number of children at the household implies that there is a big need for food/ agricultural production in order for these farmers to sustain the needs of these children. The larger the number of children at home the higher the dependence level thus participation in agriculture to get money and other necessities to feed the children.

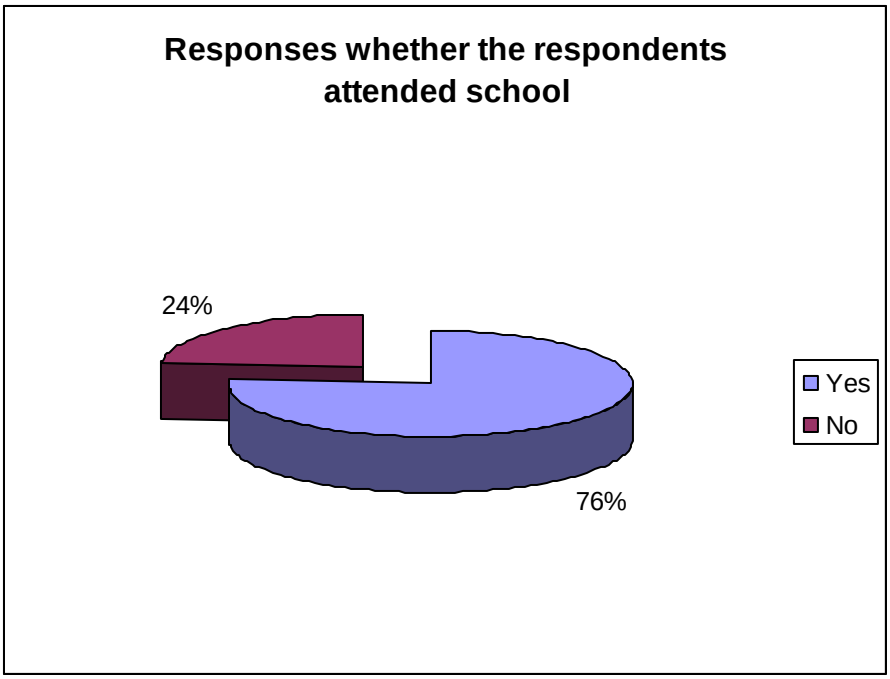
Figure 6: Religion for the respondents



Source: Primary Data (2013)

Figure 6 above shows religion of respondents. Most of them were Catholics and contributed 56.0% followed by the protestant with 37.0% the least were born-again Christians. The results on religion imply that Namasagali sub county is having more Christians, creating an impression that these respondents could participate in agriculture for six days of a week. People of different religious denominations are free and allowed to carry out agriculture by even rearing all the animals, pigs inclusive due to the religious faith they subscribe to.

Figure 7: Responses whether the respondents attended school

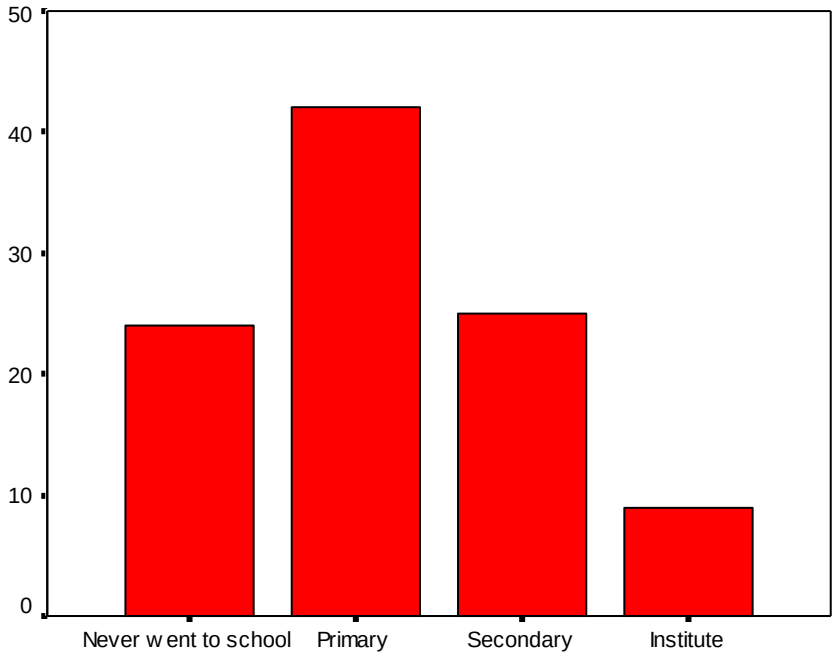


Source: Primary Data (2013)

Figure 7 above shows school attendance by respondents. When the respondents were asked whether they had attended school, 76% said "yes" however, 24% said "no". This finding implies that most of the study participants could read and write so they would interpret and understand information be it agricultural related or not. It also shows that the level of understanding was high since they had the capacity to read and write.

Secondly, the results create an implication to bear the respondents' minds on their views about what is going on in their respective villages and in relation to agriculture or household level information. The third interpretation can be that Namasagali sub county has literate and illiterate residents who need adult education to enable them easily understand information and other matters that affect their life.

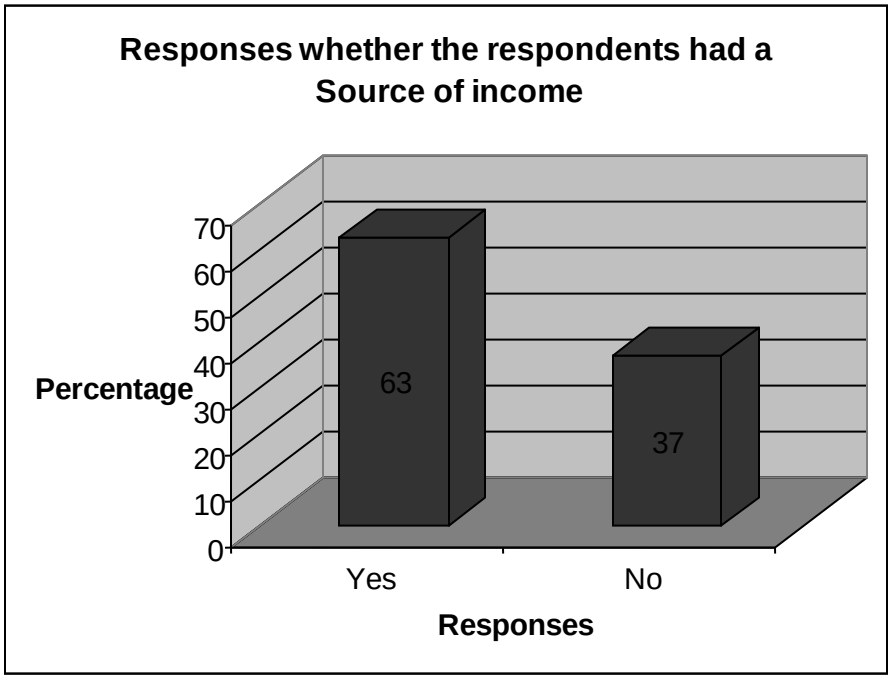
Figure 8: Level of education for the respondents



Source: Primary Data (2013)

Figure 8 above shows the level of education of the respondents. Primary level education was the category of education that had been attained by majority of the respondents 42.0% followed by 25.0% who had stopped in secondary level the least had gone as far as institute level of education with 9.0%. Those who had not received a chance to go to school were 24.0%. Therefore, the percentage of the respondents who had no education at all should not be ignored and for this study, it shows that these people need adult education that can be used at a later stage to teach these farmers issues about agriculture. Education can also help them interpret any kind of information. The respondents who had gone to school can easily be trained in agriculture matters and transfer of knowledge to their farms can be so easy after training since they have that academic exposure.

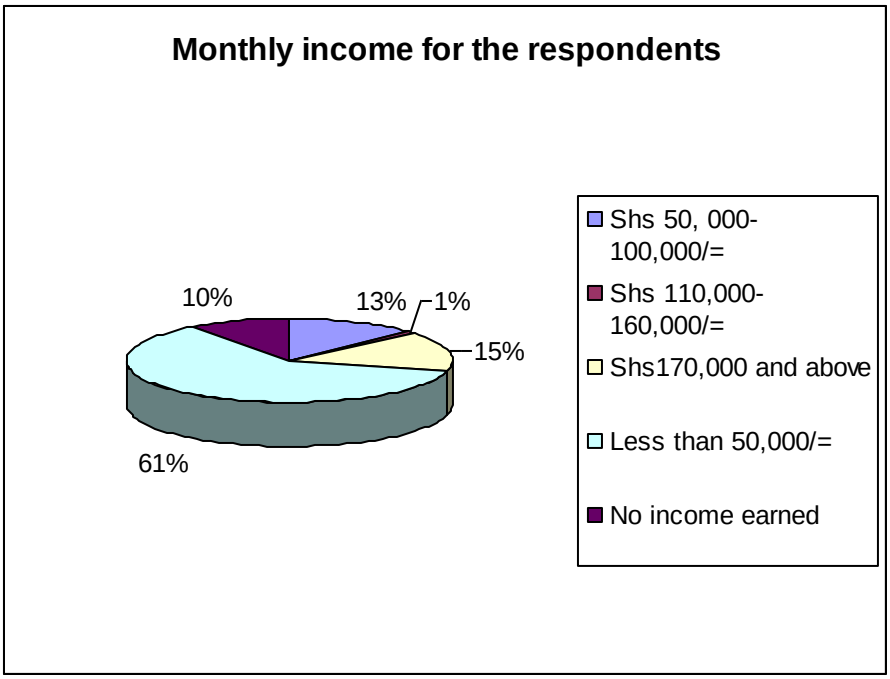
Figure 9: Responses on the source of income



Source: Primary Data (2013)

Figure 9 above shows respondent's other sources of income. Most of the respondents 63% revealed that they had other sources of income apart from carrying out agriculture and only 37% were depending on agriculture to earn money or living. This finding shows that these respondents were hard working since they could take part in agriculture as well as other income generating activities. So this an indicator of a supplementary on the income received from the agricultural produces in case they are sold as a way of meeting the daily life needs in their homes.

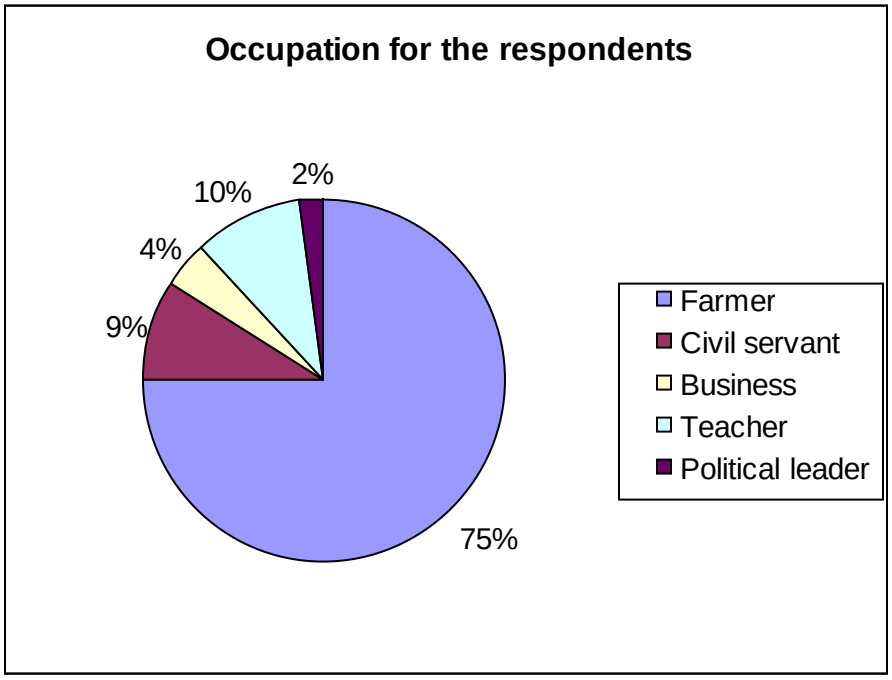
Figure 10: Monthly income for the respondents



Source: Primary Data (2013)

Figure 10 above shows monthly income for respondents. The fact that majority of the respondents were engaged in agriculture as the main source of income, they could earn differently, some, with less than 50,000/= per month, 61% revealed this. 15% of these respondents could earn 170,000/= and above and the least had income of 110,000- 160,000/=. This implies that the income for these respondents was differing depending on the income generating activity done.

Figure11: Occupation for the respondents



Source: Primary Data (2013)

Figure 11 above shows occupation of repondents.75% of the respondents were farmers followed by 10% who were teachers, 9% were civil servants and least percentage of 4 were engaged in business. This implies that sine the respondents have different occupations, they can share knowledge from other professions and they can easily interpret information from different occupations, agriculture inclusive.

4.3 The roles of Information in agricultural production in Namasagali sub county.

This study sought to identify the contributions of market information in agricultural production in Namasagali sub county. The respondents were asked different questions that could enable obtain information that answer this objective, the responses/ results are presented below in tables.

4.3(a) Program Participation

In regard to this, respondents that had participated in the program within less than 1yr were (32%), those between 2-4 yrs were (29%), those between 5-7yrs(20%)and those above 7yrs (19%) implying that majority of respondents/ farmers of (49%) had participated in the program to between 2-7years.

Table 2: program participation

Responses	**No of respondents**	**Percentage**
Less than 1 year	32	32
2-4 years	29	29
5-7 years	20	20
7 years and above	19	19
Total	**100**	**100**

Source: Primary Data (2013)

Basing on the findings, it reveals that the respondents very well knew the program and therefore, the information given was based on knowledge and understanding of each ones roles and challenges they faced during the implementation period of the NAADS program.

The interviews that were held brought different views from the respondents as indicated below;

Farmers have small groups that they use to help and encourage each other participate in agriculture **(***NAADS Coordinator, November 2013).*

Different agricultural activities are carried out and the level of participation depends on the season for example in the harvest time more farmers especially women are helping each other with harvest(Sub county Agricultural Extension Officer, November 2013)

Different farmers groups exist and these have enabled them to unite in order to engage in agriculture, these operate on the village level for example in my village We have 5 groups for farmers for both men and women that work together (*Chairman of Bwiiza Village, November 2013).*

Therefore, this implies that farmers are united to some degree and they do work together and participate in different agriculture programs.The spirit of togetherness can help them share agriculture related knowledge.

4.3 (b) Benefits from other Government Programs

Table 3: Benefit from other Government Programs

Responses	**No of respondents**	**Percentage**
Do not benefit from any other program	29	29
Benefited from other Government programs	32	32
Did not respond to the question	39	39
`	**100**	**100**

Source: Primary Data (2013)

In this case of whether respondents benefited from other government programs, it revealed that (29%) indicated that they do not benefit from any other program at all, (32%) indicated that they benefited from other government programs, whereas 39 % did not respond to the question may be because they did not have enough information concerning government programs. The 32% that benefited from other Government programs show that they are informed and know that there are other programs unlike NAADS program, the 68% reveal that there is lack of

information flows about government implementation programs as is quoted by the L.C 1 Chairperson of Bunonovillage and Namasagali Sub County Extension Officer "*Namasagali Sub county still has a big challenge as regards to distribution of other development programs simply because of its remoteness, most of the Government programs concentrate in Sub counties that are near town like Kitayunjwa and Nabwigulu".*(*Chairman L.C1, Bunono Village, November 2013).*

"Unequal distribution of opportunities in our District has greatly affected the progress as far as agriculture is concerned".(*Sub county Agricultural Extension Officer, November 2013*). This means that Farmers in Namasagali Sub County have not befitted from the opportunities that other farmers enjoy by participating in different Government development programs. This therefore means that they miss out on a lot of development information that comes along with other development partners.

4.4 Responses whether market information has helped farmers boost agricultural development

Table 4: whether market information has helped farmers boost agricultural development

Responses	No of respondents	Percentage
Yes	41	41
No	38	38
Not sure	17	17
	100	**100**

Source: Primary Data (2013

In this case, 41% of the respondents agreed that market information has helped farmers improve agricultural development, Whereas 38% disagreed that market information has nothing to do with agricultural development and 17% were not sure whether market information had anything to do with agricultural development or not. This therefore implies that though a highest number of the respondents agree on the importance of market information towards agricultural development, there is still a gap that needs to be addressed to make sure that at least most farmers utilize market information services. *"The few farmers who utilize the market information availed to them through the Sub county notice boards have benefited and have good testimonies to tell" (District NAADS Coordinator November 2013).*

"As for me, I have been helped a great deal by the information provided, before I make any attempt to sell my produce, I first inquire about the current market trends, this information I get through the NAADS office"(Chairperson Zinunula Farmer's Group, November 2013)

"Some of us are not aware of the information they put because we take long to pass by the Sub Countynotice board"…… (One of the respondents from Bwiiza village, November 2013)

Basing on the above findings, some farmers make good use of the information whereas others are completely ignorant about market information therefore, there is need for action to bridge the gap between those who utilize the information and those who do not. This gap can be bridged through intensive mobilization of farmers to make good use of the information whenever it is availed to them.

4.5 Extent of Market Information Needs of Farmers

Table 5: Extent of Market Information Needs of Farmers

Responses	No of respondents	Percentage
Need for market information	89	89
Did not respond to the question	11	11
`	**100**	**100**

Source: Primary Data (2013)

The second objective of the study was to examine the extent of market information needs of farmers under the NAADS program in Kamuli District.

Out of the 100 respondents, 89 confessed that there is need for market information and it should regularly be provided to farmers, 11% did not respond to the question may be because they did not understand it. The fact that majority of the respondents showed need of market information automatically means that there is a significant relationship between market information and agricultural development.

"As they say information is power, there is need for integration of information provision with agricultural development"(*District NAADS Coordinator, November 2013*)

"Whereas Government has done a great deal in helping farmers most especially through provision of improved seed, there is need to regularly facilitate farmers with development and market information to enable them know when and where to sell and get whatever they need in agricultural development". (*Chairman Farmer's Forum, November 2013*)

4.6 Availability of Market Information by NAADS Program

Table 6: Availability of Market Information by NAADS Program

Responses	No of respondents	Percentage
Agreed that market information is availed by NAADS	72	72
Disagreed	28	28
`	**100**	**100**

Source: Primary Data (2013)

Table 6 above gives an illustration whether the NAADS program avails market information to farmers. In this case, 72**%** of the respondents agreed that market information is available from NAADS program to the farmers. Whereas the highest percentage agreed that NAADS provides market information to farmers, 28% disagreed having seen or received market information. Though the results implies that NAADS program has done a great work in providing market information to the farmers, which in turn helps them to use and grow their foods to ensure progress and development, there is still a gap of not reaching out to all farmers. The findings are supported by the argument that in developing countries, market information initiatives are often part of a broader intervention and part of the Agricultural marketing and Agribusiness development strategy that many governments are actively engaged in. It is also argued that long transaction chains, lack of transparency, lack of standards and insufficient access to markets for products has perpetuated low incomes in predominantly agrarian- economies.(Cameroon,2001). The District NAADS Coordinator is quoted saying: "*NAADS program has done a great deal in*

providing market information to farmers which in turn helps them to use and grow their foods to ensure progress and development". (*District NAADS Coordinator, November 2013)*

4.7 Regularity of Information on Market Needs

Table 7: Regularity of Information on Market Needs

Responses	No of respondents	Percentage
Getting regular market information	30	30
Getting information once in a while	11	11
Denied getting any information	59	59
	100	**100**

Source: Primary Data (2013)

In relation to whether farmers were getting regular information on market needs under the NAADS program the results showed that 59 (59%) of the respondents denied getting any information from NAADS program, 30(30%) were satisfied with regularity of market information flows within the program, those that indicated average were 11 (11%). The findings reflected are supported by, Duala (2001), who argues out that in the current context of globalization and de-regulation of trade, accompanied by the growth of new information and communication technologies (ICTS), farmer organizations are finding themselves faced with new tasks and responsibilities at a time of rapid political, economic and social change. It is essential that they improve the flow and exchange of information in their organizational

structures, between them and other agencies and with grass root organizations. The Sub County Agricultural Extension Officeris quoted saying; *"Farmers have tried to earn some money but they struggle a lot to get market information about different market requirements and where to sell their produces"(Sub County Agricultural Extension Officer, November 2013).*

The L.C1 Chairperson of Bulondo village emphasizes that "*In my area there are no market information kiosks for agricultural produces and farmers only determine their prices, sometimes prices are set by buyers thus exploiting farmers"***(***Chairman of Bulondo Village, November 2013).*

Aina (2007) is of the opinion that farmers would benefit from global information, if information centers, are cited in rural areas complete with all information and communication gadgets.

The Chairman Farmers Forum also raises this concern "*People in this area are so poor that they sell their produces at low prices regardless of the quality, this is due to poverty, ignorance and lack of market information". (Chairman Farmer's Forum, November 2013).*

These findings therefore, insinuate that even though farmers sell part of their produce, the money they get is less due to lack of market and development information. This may lead to farmers not being able to cater for their domestic needs as well as the requirements of agriculture. So no savings are made and this is too dangerous to the development of agriculture in a sense that they will not be in position to apply modern farming techniques or even buy the required inputs.

4.8 Market Information Sharing and Updating.

Table 8: Market Information Sharing and Updating.

Responses	No of respondents	Percentage
Sharing of information among farmers	24	24
Updating of information	05	5
No sharing of information and updating of information	71	71
	100	**100**

Source: Primary Data (2013)

As regards to whether there is sharing and updating of information among the farmers, the findings found out that (71%) of the respondents disagreed that there is no regular sharing of information, only (5%)agreed that there is updating of information and 24% did not respond to the question. Therefore, the variable brings out the fact that although farmers indicate the availability of market information the levels of market information sharing, update and exchange does not occur regularly which affects their ability to determine where, when, and who to sell their products.

"Market information under the NAADS program has not utilized the structures for its dissemination, farmer's forums exist, local leaders, ordinary village meetings, locally agreed

venues exist, there are well-laid government structures that are available but not active to support farmers' market information needs". (District Production Officer, November 2013)

Farmers need to be sensitized to disseminate information amongst themselves using local means like village notice boards.However, the few who are informed keep the information to themselves without sharing it with others (*District Production Officer, November 2013*)

According to the above table of findings, information is with only a few people and they do not disseminate it to others. Updating the information is also another challenge, this means that most of the times where farmers have outdated information.

4.9 Market Information Sources

Table 9: Market Information Sources

Responses	**No of respondents**	**Percentage**
Village meetings	40	40
Group cooperatives	22	22
Radios	31	31
Newspapers	07	7
	100	**100**

Source: Primary Data (2013)

Table 9 above shows market information sources of farmers. In this case, respondents agreed that market information sources range from village meetings, group's cooperatives, radio, and newspapers. However, the biggest source of information is village meetings, followed by radios, followed by group cooperatives and lastly Newspapers.

This category means that most farmers get information when they go for village meetings, but the question is how often do the village meetings take place and how many farmers do attend them! This means that only a few farmers who attend the meetings get the information.

The findings also revealed that a certain percentage of farmers (31%) listen to local radios therefore if information is regularly put on local radios, it may reach to a certain audience of farmers. The findings also revealed that very few people read Newspapers simply because they cannot afford to buy the papers and because of the high illiteracy levels. This therefore calls for provision of other sources and channels of communication of market information like village notice boards.

"It would be proper if each zone is provided with a community notice board where information would be pinned for all farmers to read". (*L.C1 Chairperson Bunono Village, November 2013*).

*"The illiteracy levels are high therefore using Newspapers as a means of communication should be out of the q*uestion" (*Sub county NAADS Coordinator, November 2013*)

This is in line with Fraser and Villet, (1994), who advocates for traditional and popular media such as folk-theatre, puppet shows, popular poetry, as well as rural press linked to literacy programs and audio visual materials that can be highly effective channels for disseminating development information for stimulating community action.

4.10 Organized Farmer Groups and Cooperatives

Table 10: Organized Farmer Groups and Cooperatives

Responses	No of respondents	Percentage
Existence of farmers groups	84	84
Whether they are organized	11	11
Existence of cooperatives	5	5
	100	**100**

Source: Primary Data (2013)

Table 10 above shows whether there are organized Farmer groups and cooperatives. 84% agreed that the groups do exist; however, only 11% agreed that they are organized. That means that the groups are in existence but they are not organized. They are not registered at Sub County and District levels and they do not have constitutions and clear leaderships. This therefore calls for a concerted effort to organize the groups for mutual benefits. These findings also support the views of the District Agricultural Officer during the interview who pointed out that *"NAADS program cooperatives and groups are not built on strong market-oriented foundations and that is why they are either not there or poorly managed."(*District *Agricultural Officer, November 2013)*

4.11 Responses whether food security has improved as a result of market information

Table 11: whether food security has improved as a result of market information

Responses	Frequency	Percentage
Yes	51	5x51
No	49	49
Total	100	100.0

Source: Primary Data (2013

Table 11 above illustrates whether food security has improved as a result of market information. The biggest percentage of respondents (51) agreed that food security has improved as a result of accessing market information whereas 49 of the respondents disagreed. This implies that farmers who access and utilize the given market information have been able to integrate it into their day to day activities and as a result have been able to achieve and increase their food security levels as affirms the Chair person Farmer's Forum,"*The different types of information we get most especially the food security outlook help us to plan and plant the most appropriate foods depending on season and demand" (Chairperson Farmer's Forum, November 2013)*

The findings are in line with Kintu,(2010), in his report, "Role of market information in improving investment and stimulating agricultural growth to achieve food security in Eastern Africa" he asserts that,"Agricultural market Information does influence both the production, marketing and transaction component of farmer enterprises. This means that MIS has a role to play in stimulating investment growth in the agricultural sector and improving food security".

4.12 Responses whether Farmers' incomes have increased as a result of market information

Table 12: whether Farmers' incomes have increased as a result of market information

Responses	Frequency	Percentage
Yes	55	55
No	45	45
Total	100	100.0

Source: Primary Data (2013

Table 12 above illustrates whether farmers' incomes have increased as a result of market information. 55% of the respondents agreed that their incomes have increased as a result of market information and 45% disagreed. This therefore signifies that if provision of market information is seriously integrated among agricultural activities, Farmers incomes will improve and as a result there will be improved livelihoods.

4.13. Challenges faced by farmers in accessing market information and mechanisms to overcome the challenges.

As the last objective, this study sought to determine the challenges faced by farmers in accessing market information in Namasagali `Sub County. Different social, political and economic production problems experienced in agricultural production were given by the respondents and they are presented below.

Table 13: Responses whether the land under agriculture is enough for the respondents

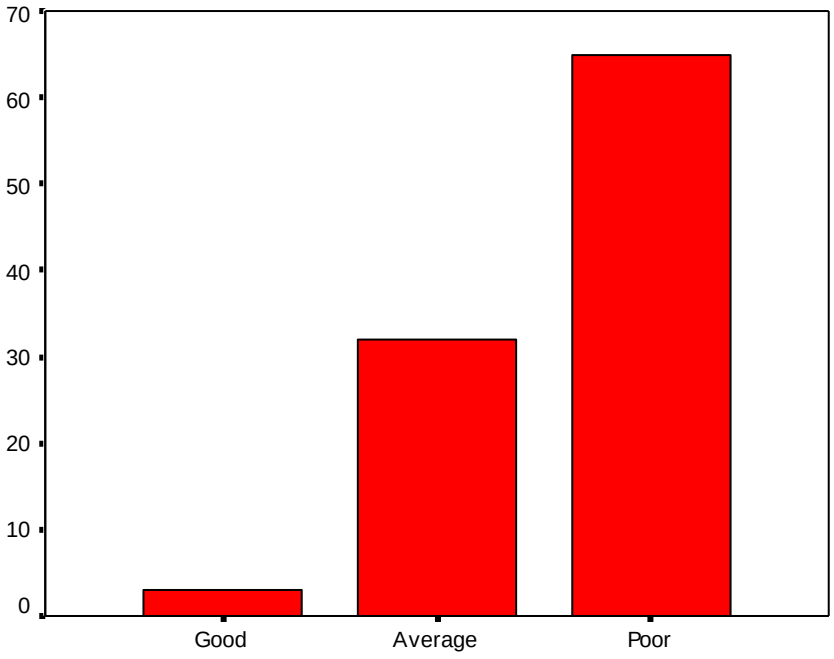
Responses	Frequency	Percentage
Yes	11	11
No	89	89

Total	100	100.0

Source: Primary Data (2013)

Table 13 gives an illustration on responses whether the land under agriculture is enough. Majority of respondents revealed that the land they have is not enough for them to carry out agriculture. This was revealed by 89.0% and only 11.0% said "yes". Therefore, this shows that there is a high need for land and there is shortage of land for agriculture in Namasagali Sub County. So, Farmer's efforts to engage in extensive/large scale farming are limited by land. Secondly this creates an implication that Farmers need agricultural training and information on how to use small piece of land to get more yields.

Figure 12: Market accessibility



Rating for market accessibility by the respondents

Source: Primary Data (2012)

Figure 12 above illustrates how farmers access markets for their produces. When the respondents were asked on how they get market for their produces, 65.0% said that marketing for the agricultural produces is poor, 32.0% rated the market accessibility as being average. This therefore, signifies that when farmers produce their crops, they face challenges to get market for their goods and this therefore, jeopardizes the efforts of commercializing agriculture since the market for agricultural produces is not readily available. Secondly, this signifies that less or no income will be earned by these farmers from the produces given the fact that some agricultural products are perishable so they will incur losses. This therefore implies that farmers lack information on where to access markets to sell their produce.

4.14 Responses on the access to modernized/scientific agriculture inputs

Table 14: Responses on the access to modernized/scientific agriculture inputs

Responses	**Frequency**	**Percentage**
Yes	16	16
No	84	84
Total	100	100.0

Source: Primary Data (2013)

Table 14 illustrates how farmers responded to whether they access modernized/ scientific agriculture inputs. Most of the respondents 84% revealed that they have no access to modern agricultural inputs. Only 16% said that they have access to these inputs. So this means that farmers lack fertilizers, genetically improved seeds as well modernized farming methods. This affects the level of output, quality and quantity that these farmers would have obtained from the size of the land they have for agriculture. On the side of animal rearing, it means that they have local breads of pigs, chicken, cows and goats among others whose produces may not be high or of the expected quality that can even compete on the market. This therefore implies that farmers

need information on how to access modern agriculture inputs, they should be helped to beyond the traditional varieties of animal breeds and crops.

"Farmers in the sub county lack agricultural inputs like fertilizers, there are no shops available to sell these products yet they are needed by farmers. Farmers walk distances to get them, and at times they are not in stock' **(***Sub County Agricultural Extension Officer,November 2013***)**

"The government is trying to give some inputs like fertilizers, hoes, and good animal breeds to farmers but these are not enough, we as leaders, face this challenge"(District Agricultural Officer, November 2013).

"As the chairman, I would advocate for the government to give us tractors to assist farmers open up more land for agriculture because a hand hoe cannot do much, even more well facilitated extension workers, otherwise agriculture is dying out in our sub county" **(***Chairman of ButaswaVillage,November 2013***)**

"The few brought items are shared among people and they are not enough, some leaders at times are too corrupt in that they do not deliver what government gives to farmers" *(LC I chairman of Bulagala village, November 2013).*The information given shows that lack of agricultural inputs means that people will still depend on the tradition methods of farming and use of rudimentary tools like hand hoes and these do not show increase for land under cultivation rather persistency of subsistence farming leading to low production.

Therefore, based on this information it can be argued that farmers in the Sub county need to be provided with information on where to access modern scientific agriculture inputs.

4.15: Responses on the pests and disease affecting agricultural activities

Table 15: Responses on the pests and disease affecting agricultural activities

Pests and diseases	Frequency	Percentage
Cassava Mosaic	50	50.0
Ground Nuts Rosette	5	5.0
Birds	8	8.0
Grasshoppers	1	1.0
Weevils/ Capillary	4	4.0
Rodents	4	4.0
Locusts	1	1.0
Fungal, Aphids and Thrips	5	5.0
Beetles	9	9.0
Wild animals	3	3.0
Ground hoppers	1	1.0
Citrus Aphids	2	2.0
Maize aphids	7	7.0
Total	100	100.0

Source: Primary Data (2013)

Different pests and diseases affect agricultural activities carried out in NamasagaliSub County but the most common diseases are “mosaic” which affect cassava plants, followed by beetles among others. This shows that farmers are getting low yields due to the effect of these diseases besides their limited income, use of herbicides and pesticides or veterinary drugs on their farms sometimes is impossible. Farmers therefore need information on how to fight the pests and diseases and information on how to apply different locally concocted pesticides.

4.16 Responses on whether farmers receive timely market information

Responses	Frequency	Percentage
Yes	11	11
No	89	89
Total	100	100.0

Source: Primary Data (2013)

Table 16 above illustrates on responses whether farmers receive timely market information. The findings revealed that timeliness of market information is a challenge to farmers. A lowest percentage (11%) of the respondent agreed to getting the information in time and the biggest percentage (89%) confessed to not receiving the information in time.

"Most of the information we get is always out dated and no longer of any use to farmers, we appeal to the relevant stake holder to avail us with information in time so that we can use it in our development aspects" (L.C1 Chairman, Bulondo Zone,November2013)

This therefore implies that information is availed to farmers but it reaches late therefore not serving the intended purposes. The communication channels therefore should be made clear and straight forward to farmers.

4.17 Responses on whether information is understood by farmers

Table 17 whether information is understood by farmers

Responses	Frequency	Percentage

Yes	34	34
No	66	66
Total	100	100.0

Source: Primary Data (2013)

Table 17 above illustrates whether information given by NAADS is understood by farmers. The findings revealed that 34% of the respondents said they were comfortable with the information provided, 66% said they did not understand the information therefore not comfortable with it.

"Most of the information we receive is in English yet a biggest percentage of our farmers are illiterate…" (*Chairman L.C 1 Butadhiba Zone, November 2013)*

"There is need to translate the information given into local language so that it is user friendly to all" (*Sub County Extension Worker, November 2013*)

4.18: Responses on how dangerous the pests and diseases are to agriculture

Table 18: Responses on how dangerous the pests and diseases are to agriculture

Responses	**Frequency**	**Percentage**
Affects quality and quantity	67	67.0
Destroys the crop/ garden	27	27.0
Rooting of the fruits/bulbs	6	6.0
Total	100	100.0

Source: Primary Data (2013)

Table 18 above gives responses on how dangerous the pests and diseases are to agriculture. The different pests and disease that affect agriculture in Namasagali Sub County were reported as being dangerous in affecting the quality and quantity of the produces. This was revealed by

67.0% of the respondents as 27.0% said that their gardens had been destroyed. So this implies that farmers need information and accessibility on genetically modified crops or animal breeds that are resistant to these attacks.

Over the pests and diseases that affect the crops, bird and animals of the farmers in Namasagali Sub county, it was revealed that;

"Sometimes these pests are seasonal and they come when farmers have grown their crops especially in the dry season" Sometimes locusts destroy farmers crops and these are seasonal however"(NAADS Coordinator, November 2013).

"During the dry seasons pigs are vulnerable to disease, farmers have lost their animals but with the support of the government we are handling the situation so that farmers do not lose out"(Sub County Agricultural extension Officer,November 2013)

"Some pests and drugs have been given to a few farmers but the supplies are inadequate due to limited funding but we try as the district to assist our farmers who are mostly affected with lack of agricultural inputs"(*District Agricultural Officer, November 2013*).

"*Pests and diseases are existing and they do affect crops but some farmers have been given information on how to apply local pesticides and medicine to treat their animals or birds and at times this has worked out".* **(***Chairman of Butaswa village,November 2013***).** The different pests and diseases that affect farming in this sub county contribute much on the level of yields that will be obtained at the end of the season this can also affect the quality of the produces that will be taken on the market.

Therefore, with the above information and appeals to the government as far as pests and diseases are concerned, it can be argued that farmers in Namasagali Sub County are faced with a challenge of diseases and pests and this affects agricultural production by making the producers of poor quality and quantity.

This further supports the literature that the National Development Plan (NDP) has proposed to increase agricultural production by improving technology in the sector, ensuring delivery of advisory services, controlling diseases and increase of water supply for irrigation, livestock and aquaculture and encouraging effective land use. However this remains a mere wish as budget allocation to the sector continues to decrease. For instance the 2011/12 national budget allocation to agriculture was mere 4.5% of the national budget which is still far below the 10% commitment of the Maputo declaration.

4.19: Possible ways farmers can solve the challenges in agricultural production

Table 19: Responses on possible ways farmers can solve the challenges in agricultural production

Responses	**Frequency**	**Percentage**
Providing improved seeds and animals to farmers	44	44.0
Fighting corruption among political leaders	5	5.0
By lobbying for support	1	1.0
Decide prices for their produces	2	2.0
Getting more land for farming	4	4.0
Borrowing money from financial institutions	1	1.0
Bringing veterinary drugs on market and Sensitizing farmers on good farming practices	2	2.0
By joining Micro finance institutions	1	1.0
By practicing collective marketing for the produces	3	3.0
By providing farmers with good varieties of seedling	1	1.0
By saving in groups	1	1.0
Carrying out more of commercial agriculture	1	1.0
Farming groups and working together	2	2.0
Creating marketing information centers at Zonal level	3	3.0
Getting modern skills of agriculture	1	1.0
Getting markets for the products	2	2.0
Application of fertilizers	1	1.0

Opening up small-scale business	1	1.0
More sensitization by extension workers	2	2.0
Provision of market information by government	11	11.0
Getting timely market information	2	2
Updating market information	2	4.0
Sharing information with fellow farmers	2	2.0
Translating information into local langauge	3	3.0
Stating up their own gardens	1	1.0
Working together with family members	1	1.0
Total	100	100.0

Source: Primary Data (2013)

More of the respondents said that they need to be provided with improved seeds and animals in order to overcome the challenges they face in their efforts to contribute to agricultural production.

The key informants were asked strategies or solutions that farmers should take to solve the challenges that affect their contribution to agricultural production and the following was received;

"They should get involved in the government programs that aim at modernizing agriculture and this will make them get the necessarily knowledge and skill for increased agricultural production"(NAADS Coordinator, November 2013).

"Getting agricultural loans from micro finance institutions can help them have some money to invest in agriculture"(Sub county Agricultural extension, November 2013).

"*Turning to farming with genetically improved seeds that are resistant to the bad conditions of weather as well as pests and disease will stimulate their contribution to agricultural production"(LC I chairman of BwiizaVillage, November 2013).*

"Better utilization of the money obtained from agricultural produces will enable farmers earn some money as well as save some for future development sinceagriculture is the key to development" (LC I chairman of Bunono village, November 2013).

Based on the information given in relation to the provision of loans to farmers in Namasagali SubCounty, it should be noted that these loans will not benefit them unless they are trained before giving them the money. They should also be given lower interest rates for the money given and a higher grace period for payment because the returns in farming are long-run.

"Encouraging fellow farmers to practice modern farming methods will help to keep the soils fertile thus leading to high yields"(LCI Chairman of Butadhiba village,November 2013)

"Farmers should focus on extensive farming with the help of the district facilities like the tractor that the president gave us under the NAADS program. This will increase land under cultivation thus high production" **(***District Agricultural Officer, November 2013***).**

"Farmers can also engage in market search for their produce and share the acquired information with fellow farmer. This will encourage mass production since farmers will have a wider market"(LC I Chairman of Buwaibale Village, November 2013) .

Based on the findings, it can be argued that agriculture or farming in Namasagali sub county calls for support from local residents, leaders and the government. Any kind of support given will be significant in making farmers produce high quality agricultural products as well as creating markets for these outputs. So in analysis, it is the work of everyone within Namasagali Sub County to come to the rescue of farmers in matters of agriculture.

Similarly, government was also highlighted by the key informant as an important body that can assist farmers in providing them with market information to agricultural production. The key informants gave the following information;

"*Government should strengthencommunication channels to peasant farmers this will help in boosting agriculture"* **(***NAADS Coordinator***,***November 2013***).**

"Funding to the information strategy should be given priority, this will enable farmers receive information that will boost agriculture". **(***District Production Officer***,***November 2013*).

*"Free agricultural inputs like seeds, tools and fertilizers should be given to farmers as an effort to increase the numbers engaged in agriculture" (LC I Chairman of*Buwaibale village,*November 2013*)

Therefore, these solutions given by the key informants show that there is a lot to be done by all the stakeholders in the agricultural sector as away of empowering and supporting farmers in Namasgali sub county to access market information.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations pertained to the study. They are presented as discussed according to the objectives of the study.

The study findings showed that majority of the respondents had heard about the NAADS program and all its related activities.

5.2 Summary of findings

The study is titled ‘’Assessing the contribution of Market Information in Agricultural development under National Agricultural Advisory Services (NAADS) Program in Kamuli District. There were three fold issues that were tested; (a) To examine the extent of market information needs of farmers,(b) To identify the role of market information in agriculture development under the NAADS program and (c) To determine the challenges faced by farmers in accessing market information and devise mechanisms to overcome the challenges.

Findings of the study revealed that farmers are in need of market information and Government through the NAADS program has tried to avail market information to farmers which has contributed to agricultural development though the information has not been tailored and translated into farmer’s information need requirements.

A lot of other challenges facing farmers while accessing market information were also sighted some of which included; irregularity in receiving information, receiving outdated information, and information not translated into local languages to mention but a few.

5.3 Conclusions

The study on the Contribution of Market Information on agricultural development under NAADS program in Kamuli District is an eye opener for any reader and researcher about the level of market information needs of farmers in their quest for participation in the agriculture development.

Since Agriculture is an information dependent sector where there are new and rather complex problems facing farmers every day and the information needs of small scale farmers revolve around the resolution of problems such as pest hazards, weed control, moisture insufficiency, soil fertility, farm credit, labor shortage, soil erosion and so forth, Government should continuously avail information to famers to boost Agricultural development.

5.4 Recommendations

1. The study recommends that the NAADS secretariat hire a Specialist in Agribusiness who can directly interact with farmers and give them expertise on matters relating agricultural markets and all the necessary information requirements.
2. The NAADS secretariat should give priority to information strategy by directly funding it through local Governments.
3. The study also recommends that although market information is highlighted in the NAADS program master document , let it be translated into farmer's information needs requirement i.e by channeling the information through village notice boards and translating the information in local language.
4. The study recommends that methods of communication, choices and channels and message packaging be improved by utilizing the strong traditional methods and

integrating the local media like folk lore, clan meetings, funeral right ceremonies and now the modern mobile phones.

5. The study recommends also that farmer cooperatives and groups like High Level Farmer Organization (HLFOs) support and training be guided by the market-oriented strategy of where the farmer makes a choice either he/she goes for maize for Animal production or for human consumption all this is driven by the market information.

5.5 Suggestions for further Research

Based on the results of this study, the following recommendations are made for further research.

1. A similar research should be conducted in the country to examine the level of farmer market information needs and their participation in Agriculture development.
2. An assessment study of farmer market information flows under the NAADS program should be conducted.
3. A study about the role of effective market information to farmers under the NAADS program be conducted.
4. An assessment of the rural effective communication of market information in the rural setting; a case for the NAADS program.

REFERENCES

Abd Rahman Abdul Rahim & Mohd Shariff Nab Baksh (2003) *Case study method for New Product Development in Engineer-to –order Organisation*: WEork Study vol52, No1MCBUP Limited Publishers.

Adebua Asaf et al (2007) *Poverty Policy Perspective:* Household Efforts in Poverty Alleviation in Northern Uganda with respect to Agriculture under Structural Adjustment Program: The Case of Arua District NURRU Publications.

ACP-EU (1998), *Technical centre for Agricultural and rural cooperation.*

Adebua Asaf et al (2007) Poverty Policy Perspective: Household Efforts in Poverty Alleviation in Northern Uganda with respect to Agriculture under Structural Adjustment Program: The Case of Arua District NURRU Publications

Adler Emily Stier & Rioger Clerk (2010) *An invitation to Social Research*: How it's done: Wadsworth Cengage Learning CenterUSA.

African Communication Project - summary report (1995),

African Development report (2005),

Agricultural Sector Development Strategy and Investment Plan (AS-DSIP) 2010/11-2014/15

Anthony, (1995): FAO, *Understanding farmer's Communication networks*; an experience in the Philipines

Apio(2010) *Gender mainstreaming in agriculture with special reference to Uganda:* Challenges and prospects: Namulonge Agricultural Animal Production Research Institute (NAARI), Kampala – Uganda. African Crop Science Conference Proceedings, Vol. 6. 699-703.

Aqua report (1998), *The role of information technology agriculture*

Bakunda (2001) *The Impact of a Liberalized Trade Regime on the Potential for Agricultural Value Addition in Uganda*

Cagarn Leornard (2007) *Doing Social Research*: Rowman and Lillefield Publishers Inc UK.

Cameroon. (2001), *management of market information*

CEEWA-UGANDA (The Council for Economic Empowerment for Women of Africa- Uganda Chapter report November, (2007)

Centre for Agriculture and Rural Cooperation (2001),

Claire Bless, Craig Higson-Smith, Ashraf Kagee (2006) *Fundamentals of social research methods:* an African perspective; Fourth Edition, Lusaka Zambia.

Community Technical Advice report(2001),

Duala (2001)*Seminar report,* Technical center for Agriculture and rural cooperation

Edwards –Jones (2003) *Modeling farmer decision-making: concepts, progress and challenges.*

Empowering small scale rural Indian farmers with information(1998)

FAO (1995) *Rural producers: Trends, issues and challenges for socio-economic development.* In "Filling the data gap gender-sensitive statistics for agricultural development.

FAO (1999). *Women in Population, Gender and Food Security*

FAO (2007**),** *farm management data and information systems*

Farmer' Organizations and Social Communication system (2004

Fisher, C. (2007) *Reading and writing a dissertation:* A guide for Business students, 2nd edition, Pearson Education Ltd. England UK.

Frazer and Villet (1994) *Communicating for market information*

Griffith and Smith (1994) *telecommunications infrastructure*

Improving agricultural extension manual (1998,) Philippines

Kintu,(2010), *Role of market information in the improving investment and stimulating agricultural growth to achieve food security in Eastern Africa*

Kothari CR(2008) *Research Methodology:* Methods and Practices Techniques: New Age International Publishers, New Delhi India.

MFPED, (2007/08) *reducing poverty levels*

Mugenda, O.M. & Mugenda, A.G. (1999) *Research methods: quantitative and qualitative approaches (Ed).* African Center for Technology Studies Press, Nairobi, Kenya.

Munyua, (2000).

NAADS, master document of the task force (2001

Nabasirye Margaret and Sicco Kolijn (1996), *Gender in Agricultural Engineering Activities of the Post Harvest Programme of Uganda.* Paper prepared for the workshop on Gender and

Agricultural Engineering for Southern and Eastern Africa, Kodoma, Zimbabwe 4-8 March, 1996 pp 9.

Nnamdi (1990)*Information Needs of Small Scale Farmers in Africa*

Mcgee and Prusak (1993) *Describing the idea of information markets*

Ocilaje (2004), *Draft Communication Strategy-TA-CB and IEC/CD*

Rusoke, Nyakuri and Gathiru ((2000),

Thanos Athanasiou, Ara Darzi (2010)*Key Topics in Surgical Research and Methodology*, Imperial College London.

The New Vision (24th August and 7th September, 2010) "*Harvest for money;* your guide to successful farming dated

Uganda Land Resources Manual (2000), *A guide to Extension workers*

Uganda National Farmer's Association (1999),

UNDP, (2006). *Analysis of income poverty*

UNDP, (2008) *Uganda Millennium Development Goals*

Villet, (1994), *Communication key to human Development*

APPENDICES

Appendix I: Questionnaire for Farmers

ASSESSING THE CONTRIBUTION OF MARKET INFORMATION IN AGRICULTURAL PRODUCTION A CASE STUDY: NAADS PROGRAM, NAMASAGALI S/C KAMULI DISTRICT

1.0 Section A: Introduction

The main purpose of this study is to assessing the contribution of market infotrmation in agricultural production a case study: Namasagali s/c Kamuli district. The result of the study will be used entirely for compiling a report for the purpose of obtaining a degree in masters of development studies, NGO management of Uganda Martyrs University Nkozi. The information obtained from this report will be treated with **STRICT CONFIDENTIALITY.**

Fill in the correct code in boxes or tick the correct answer(s) from the list provided

Section B: Background Characteristics

1. How old were you at your last birthday? Age in years

18-25 years ☐ 26- 33 years ☐ 34-41 years ☐ Over 41 years ☐

2 what is your marital status?

1. Marital status ☐ Married ☐ Single ☐ Divorced ☐ Widowed ☐
2. If married, how many children do you have? ☐ children
3. Religion Catholic ☐ Muslim ☐ Protestant ☐ Born-again ☐

Others (specify) ……..

4. Have you ever attended school?

Yes ☐ No ☐

5. Level of education

Never went to school ☐ Primary ☐ Secondary ☐ Institute ☐

University ☐. Others (specify) ……

6. Do you have any source of income?

Yes ☐ No ☐

7. What is your occupation?

Farmer ☐ Civil servant ☐ Business personnel ☐ others (specify) ……

8. How much do you earn per months? Estimate Shs ☐

Section C: Contributions of market information in Agriculture Production

9. For how long have you participated in the NAADS program? (**Pick one)**

Less than 1 year ☐ between 2-4 years ☐ above 7 years ☐

10. What is your designated role in the NAADS program?……

11. Does the respondent benefit from other government programs other than the NAADS program?

A) Yes ☐ b) No ☐

12.If yes, state the program.……

13. Has market information played a great role in promoting agricultural development in your area? YES ☐ NO ☐ Not sure ☐

Section D: Extent of market information needs of farmers

14. Are farmers in need of market information in your area?

Yes ☐ No ☐

15. Is market information readily availed to farmers when they need it?

Yes ☐ No ☐

16. Is market information regularly provided in time?

Yes ☐ No ☐

17. Is there market information sharing and updating among farmers in your areas?

Yes ☐ No ☐

18. What are the different sources of market information in your area? **Pick one**

Village meetings ☐ Farmers cooperatives ☐ Radios ☐ Newspapers ☐ ☐

19. Are there farmers groups and cooperatives in your area?

Yes ☐ No ☐

20. If yes, are they organized?

Yes ☐ No ☐

21. Has food security improved as a result of market information in your area?

Yes ☐ No ☐

22. Have farmers' incomes increased as a result of market information in your area?

Yes ☐ No ☐

23.Is there improved livelihoods in your area as a result of market information?

Yes ☐ No ☐

Section E: Challenges Farmers face

24.Is land to practice Agriculture enough in your area?

Yes ☐ No ☐

25.Do you have access to modernized/scientific agriculture inputs

Yes ☐ No ☐

26. How is market accessibility for your produces?

Good ☐ Average ☐ Poor ☐

27. Which pests and diseases do you face in your agricultural activities?.....

28. How dangerous the pests and diseases are to agriculture?

……..

29. Do you have access or apply mechanization on your agricultural farm

Yes ☐ No ☐

30. Do you receive timely market information?

Yes ☐ No ☐

31. Do you understand the information given to you?

Yes ☐ No ☐

32. .Do you think farmers can help themselves out of the challenges they face?

Yes ☐ No ☐

33.If yes, how can this be possible?

…….

Thanks for your contributions

Appendix II: Key Informant Interview (KII) Guide

This Key Information interview guide is intended to enlist from you very important in-depth information on the research area. I sincerely seek your cooperation.

1. What do you understand by market information?

…….

2. What do you understand by information needs?

…….

3. How long have you been involved directly or indirectly in Agriculture development?

…….

4. How long have you been involved indirectly in Agriculture development?

…….

5. What do you understand by farmer participation?

…….

6. Have ever been in any way involved in facilitating farmer participation?

…….

7. If yes how and for how long?

…….

8. Give your position while dealing with farmers

…….

9. Give your experience while dealing with farmers

…….

10. Do you think there is well laid down structures for market information access?

…….

11. How do you get involved in ensuring that communication takes place targeting the beneficiaries like the farmers, traders, suppliers?

    …….

12. From your own view what would you consider to be the means of disseminating market information to farmers within Kamuli?

…….

    What would you consider to be the means of disseminating market information in your of work?…….

13. Do you envisage any challenges in an attempt to meet the farmer's market information needs in Kamuli district?

    …….

14. What is the best way to overcome the challenges mentioned above?

    …….

15. Comment on the existence of government policy in relation to farmers accessing market information in rural areas like Kamuli district.

    …….

16. Comment, also on the statement that farmer's participation has increased as a result of the inception of NAADS program in Kamuli District

    …….

    …….

17. What is your view on the assertion that "farmers' participation in Agriculture development has led to improved bargaining power, farmer unions/groups"

    …….

18. In view of the above scenario do you think the need for market sources, holding of market forums (meetings) and farmer cooperatives have any direct effect on farmer participation in Agriculture development?

    …….