THE ROLE OF NATIONAL AGRICULTURAL ADVISORY SERVICES (NAADS) PROGRAMME ON PERFORMANCE OF SMALL SCALE FARMERS IN UGANDA

CASE STUDY: KAMUKUZI DIVISION, MBARARA MUNICIPALITY.

An undergraduate dissertation presented

to the Faculty of Business Administration and Management in partial

Fulfillment of the Requirements for the award of the degree in

Business Administration and Management of

Uganda Martyrs University

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2011-B021-10321

APRIL, 2014

DEDICATION

This work is dedicated to my parents Mr. Nkabakyenga Bonny and Mrs. Nkabakyenga Winfred Ngabirano who sacrificed a lot for my education and supported me each step of the way.

ACKNOWLEDGEMENT

I give glory and praise to the almighty LORD, for without Him I would not have made it to complete this dissertation successfully.

Special thanks go to my parents Mr. Nkabakyenga Bonny and Mrs. Nkabakyenga Winfred Ngabirano, my siblings Nabimanya Anthony, Nagaba Daphne, Mutetsi Lynn, Nuwagaba Prince Aubrey and Nasiima Jean Julia and friends Edonu Janaan and those un mentioned for their unending support, motivation, encouragement they gave me throughout the study period.

I sincerely acknowledge the dedicated intellectual guidance, supervision and academic support I received from my supervisor Mr. Kibrai Moses throughout the entire study period. This work was as a result of his support

TABLE OF CONTENTS

LIST OF TABLES

ABBREVIATIONS

AADA	:	Africa Asia Development and Agriculture
ADB	:	Agricultural Development Bank
AKR	:	Angkor Kasekam Roungroeung
AMSs	:	Agricultural Marketing Services
APSs	:	Agricultural Service Providers
ARB	:	Arachide de Bouche
ATAAS	:	Agricultural Technology and Agribusiness Advisory Services
CEDAC	:	Cambodian Center for Study and Development in Agriculture
DFID	:	Department for International Development
ESAFF	:	Eastern and Southern Africa Small Scale Farmers Forum
FAO	:	Food and Agricultural Organisation
HVAF	:	Higher-Value or differentiated Agricultural and Food products
MAAIF	:	Ministry of Agriculture, Animal Industry and Fisheries
NAADS	:	National Agricultural Advisory Services
NAADS	:	National Agricultural Advisory Services
NASFAM	:	National Smallholder Farmers' Association of Malawi
NGOs	:	Non-Governmental Organizations
PMA	:	Plan for Modernization of Agriculture
PWD	:	Persons With Disabilities
SIDA	:	Swedish International Development Cooperation Agency
U.S	:	United States of America
VFF	:	Village Farmer Forum
WDR	:	World Development Report

ABSTRACT

This study examines the role of national agricultural advisory services (NAADS) programme on performance of small scale farmers in Uganda basing on Kamukuzi division as a case study. It was based on three specific objectives which included: To examine the relationship between commercialization of agriculture and the performance of small scale farmers, to assess the relationship between food security and the performance of small scale farmers and to evaluate the relationship between market access and the performance of small scale farmers. The study employed a case-study research design using both the qualitative and quantitative approaches. The researcher used interview guides and the questionnaires for data collection. The researcher also based the study on previous literature. In the findings, the research revealed: that new breeds and improved seeds are crucial for the transformation of agriculture from subsistence farming to commercialized farming, that there is increased food security among the NAADS beneficiaries and that giving the small scale farmers market information helps in reducing the rate of risk faced by the farmers. The researcher concludes that commercialization, market access and food security contribute to the welfare, income levels and levels of production of the small scale farmers. The researcher also recommends that the NAADS Implementation Guidelines be followed strictly in order to meet its mandate.

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

It is clear that farmers especially those in rural areas require advisory services which NAADS is designed to address. Therefore this agriculture, food security and market access and the attributes of the performance of small scale farmers that study is designed to establish the role of NAADS on the performance of small scale farmers. It also explains the attributes of NAADS which are commercialization of is, level of output, level of income of farmers and the welfare of the farmer. This study is based on previous literature such as NAADS implementation guidelines and it sets to establish the contribution of NAADS in addressing the performance of small scale farmers.

1.1 Background to the study

According to Hakiza et al (2004), Jones and Rolls (1982) state that throughout the world, a large number of professional workers are engaged in disseminating information and giving advice to farmers and their families, and other rural people on technical, economic, and organizational development which could be of benefit to their livelihood. However, one of the perennial stumbling blocks in African agricultural development has been the lack of relevancy of research themes and extension 'messages' to the majority of concerns faced by the continents' small holder farmers (Simpson and Owens, 2002). The history of extension approach in Uganda has been in six phases Driciru (2008). She further stated that they included extension services through the chiefs (1920-1956); the progressive farmer period (1957-1963); the extension education phase (1964-1971); the non-directional phase (1972-1979); the recovery phase (1980-1991); the unified service and Training and Visiting (1991-2000), which emphasized regular scheduled farmer training and visits to ascertain the contact farmers adopt package disseminated (AHI 1997, Semana 1998 and Friis-Hansen 2002). The

various enumerated agricultural extension service failed to effectively deliver the necessary agricultural services to the poor farmers which led to the introduction of NAADS in 2001 to address the services to the farmers.

National Agricultural Advisory Services (NAADS) is a recently developed program under Ministry of Agriculture, Animal Industry and Fisheries created under Plan for Modernization of Agriculture (PMA) as one of government's efforts to reduce poverty and food insecurity. NAADS was created by the act of parliament (NAADS Act 2001) and is considered to be part of the Agricultural Sector Reforms (NAADS, 2000a); the Act establishes and regulates the operations of NAADS as an institution. NAADS being one of the five core programs under PMA is charged with the task of commercialising the agricultural sector. The PMA envisions that NAADS will be "a decentralised, farmer owned and private sector service extension system" (NAADS, 2000). The rationale for NAADS is the failure of the traditional extension approaches to bring about greater productivity and expansion of agricultural services to farmers, despite costly government interventions. The fundamental aim of the NAADS program is to develop demand-driven, client oriented and farmer-led agricultural service delivery system particular targeting the poor subsistence farmers but with emphasis on women, youth and Persons With Disabilities (PWD) (MAAIF 2000a; 2000b).

The rationale for the NAADS programme, therefore, is responsiveness to the failure of traditional extension approach to bring about greater productivity and expansion of agriculture, despite costly government interventions. The fundamental aim of the programme is to develop a demand driven, client-oriented and farmer-led agricultural service delivery system particularly targeting the poor (MAAIF, 2000).

The rationale for the NAADS programme begun in 2001 and is in the thirteenth year of its operation. In its first year, NAADS programme started in six 'trial blazing' districts of Arua, Kabale, Mukono, Soroti, Kibale and Tororo in four sub-counties each. In July 2002, additional five sub-counties were taken on board in each of these districts along with 76 sub-counties in 10 new districts; Bushenyi, Busia, Iganga, Kabarole, Kapchorwa, Kitgum, Luwero, Mbarara, Wakiso and Lino (NAADS,2003). It is when it was brought to Mbarara in phase II in 2002 that it got to Kamukuzi division. This study therefore sets to establish if implementation of NAADS programme explains the performance of small scale farmers.

1.2 Statement of the problem

In Uganda, agriculture is the source of livelihood for 90% of the country's population, 95% of which are resource-poor small-scale farmers. There are a number of problems facing small scale farmers in Uganda such as climate changes and its effects , challenges in accessing markets, limited access to credit facilities, poor infrastructure, fluctuating fuel prices, lack of post harvest handling techniques, land wrangles and insecurities resulting from land wrangles, rural-urban migration leading to loss of potential youth labour, infiltration of genetically modified seeds threatening the existence of indigenous seeds and poor rain water harvesting techniques and technologies.

The government and other organisations have made attempts to overcome these problems. This has been especially through coming up with groups to help deal with the problems faced by the farmers for example, the Eastern and Southern Africa Small Scale Farmers Forum (ESAFF- Uganda) is an organization of small-scale farmer groups and organizations working together to empower and to improve the livelihoods of small-scale farmers in Uganda. ESAFF Uganda is an affiliate of the regional body founded by small-scale farmers from eastern and southern Africa – ESAFF which include countries of Uganda, Kenya, Tanzania, South Africa, Zambia, Zimbabwe, Lesotho, Swaziland and Mozambique. The government

has also come up with strategies to deal with this problem and this has been done in six phases; Extension services through the chiefs (1920-1956); the progressive farmer period (1957-1963); the extension education phase (1964-1971); the non-directional phase (1972-1979); the recovery phase (1980-1991); the unified service and Training and Visiting (1991-2000), which emphasized regular scheduled farmer training and visits to ascertain the contact farmers adopt package disseminated (AHI 1997, Semana 1998 and Friis-Hansen 2002).

Government introduced NAADS in 2001 in an attempt to address the problem but its effect has not been empirically proved, hence this study.

1.3 Objectives of the study

1.3.0 General objective

To investigate the effect of National Agricultural Advisory Services programme performance of small scales farmers in Uganda.

1.3.1 Specific objectives

a) To examine the relationship between commercialisation of agriculture and the performance of small scale farmers.
b) To assess the relationship between food security and the performance of small scale farmers.
c) To evaluate the relationship between market access and the performance of small scale farmers.

1.4 Research questions

a) What is the relationship between commercialisation of agriculture and the performance of small scale farmers?
b) What is the relationship between food security and the performance of small scale farmers?

c) What is the relationship between market access and the performance of small scale farmers?

1.5 Hypothesis

There's a relationship between the role of NAADS and the performance of small scale farmers.

1.6 Scope of the study

1.6.1 Geographical scope

The study was carried out in Kamukuzi division, Mbarara municipality in Mbarara district. Mbarara district is located in the South Western part of Uganda about 280 kilo metres West of Kampala.

1.6.2 Subject scope

The study covers the independent variable(Role of NAADS) and its dimensions, that is, commercialisation, food security, and market access and the dependent variable(Performance of Small scale farmers) and its dimensions, that is, level of output, level of income of the farmers and welfare of the farmers. The study does not cover the extraneous variables which include; government policy and political climate.

1.6.3 Time scope

This was based on current information and therefore the data was collected from respondents in the current period in order to ascertain and achieve the research objectives.

1.7 Significance of the study

The study may provide information to Uganda that may guide in policy making in NAADS as a government initiative.

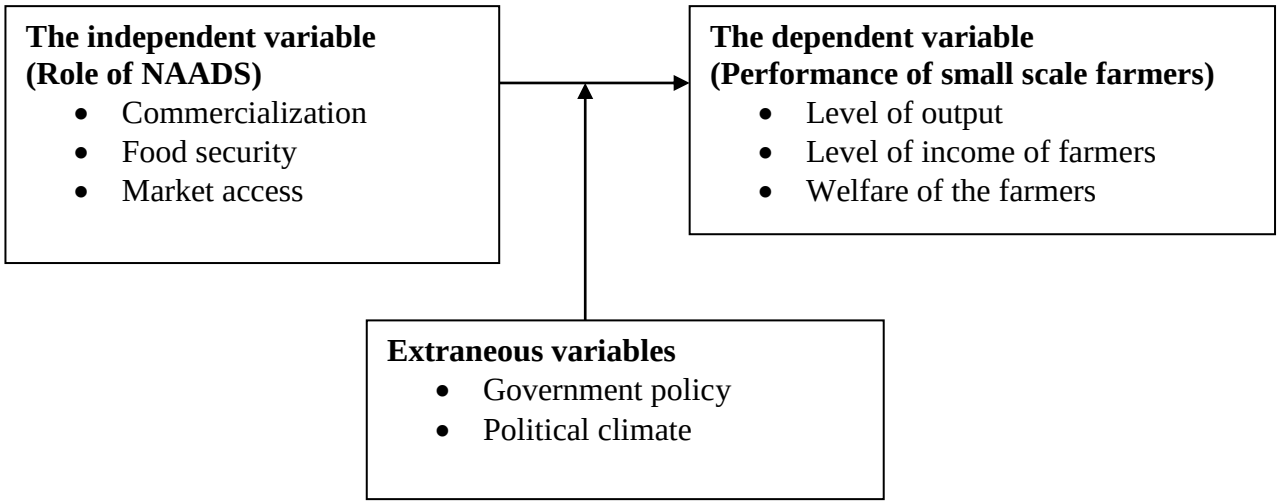
It may also be a basis for further research by other researchers and academicians who may add on knowledge and gaps on the role of NAADS and performance small scale farmers.

Study helped the researcher to gain research skills related to undertaking research, including strategies and tools for accessing and evaluating information.

1.8 Justification

Since agriculture is the source of livelihood for about 90% of the Uganda's population , 95% of whom are small scale farmers makes it important to understand their performance. This is because it means that if they are to perform poorly, then the overall performance of the country is affected and vice versa. Therefore a study which sets to establish empirically the performance of small scale farmers becomes a critical issue not only for academic purposes but also for policy makers and implementers.

Fig. 1.1 The conceptual frame work



Source: *NAADS Implementation Guidelines 2010*

1.9 Explanation of the conceptual frame work

The conceptual frame work above shows the relationship between the independent variables, the dependent variable and the extraneous variables and their dimensions as shown in the figure. The researcher used the many to one approach in which each dimension of the independent variable is related to the independent variable. The conceptual frame work also shows how the extraneous variables affect the independent variables to cause an impact on the dependent variables.

1.10 Definition of key concepts

Advisory services: These are services provided to farmers and farmer groups in form of guidance to help successfully operate and manage their farming enterprises.

Subsistence farming: This is the type of farming relating to production at a level sufficient for one's own use or consumption without any surplus for trade

Farmer group: A group of individual farmers or an association with a common farming interest.

Advisory service provider: A person or a body contracted to provide advisory services.

Market oriented: This is production that is guided by market demand.

NAADS beneficiaries: These are people who benefit from the NAADS programme.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides the existing literature that was reviewed by the researcher about the role of NAADS Programme on performance of small scale farmers. The researcher in this chapter talks about each objective. Each objective is a dimension of an independent variable related to the dependent variable. This helps to build up knowledge on what different authors have to say about each independent variable dimension and the performance of small scale farmers. The various sources used for this literature review included Journals, text books and organisational documents.

2.1 Commercialisation and Performance of Small scale Farmers

Leavy and Poulton (2007) define commercialisation as the degree of participation in the (output) market, with the focus very much on cash incomes. In addition to this, they also note that commercialisation three dimensions; first, there is the degree of participation in input markets. As farms become more commercial, they tend to rely less on own-produced inputs (e.g. manure, retained seed) and services from mixed farming systems (e.g. animal traction) and instead depend more on markets to supply their inputs (improved seed, inorganic fertiliser, crop protection chemicals) and services (mechanised equipment for ploughing, planting, weeding, harvesting etc – either hired/rented or purchased), Second, it is observed that, as farms become more commercialised, they rely increasingly on hired labour, with family labour focusing more on supervisory and managerial tasks. This may be linked to the opening up of other opportunities for the family's labour elsewhere in the economy. As farm production becomes increasingly business-oriented, rather than a matter of survival, some family members may choose to work in other occupations, with the remaining members

hiring in workers to accomplish the necessary tasks. Third, some writing on commercialisation highlights the importance attached to the profit motive within the farm business as an indicator of commercialisation. Thus Leavy and Poulton in addition state that Pingali and Rosegrant (1995: 171) state that: Agricultural commercialization means more than the marketing of agricultural output; it means the product choice and input use decisions are based on the principles of profit maximisation. Commercial reorientation of agriculture occurs for the primary staple cereals as well as for the so-called high value cash crops. On the input side, commercialization implies that both traded and non-traded inputs are valued in terms of their market value.

Leavy and Poulton state that work by the Future Agricultures Consortium in Ethiopia has identified fears that commercialisation means, among other things: A focus on non-food crops, squeezing out the smallholder farmer, expropriation of land, displacement, dispossession of peasants, increased food insecurity, capitalism mechanisation, modernisation and capital intensity, rather than labour intensity. Leavy and Poulton state that in other words, there is a fear that commercialisation essentially means promoting change that is in the interests of larger, more powerful players to the detriment of smallholder farmers. They further explain that small-scale farmers can be sub divided into; Small-scale "non-commercial" farmers and Small-scale commercial farmers. They define Small-scale "non-commercial" farmers as those that might sell some produce but do not or cannot make their entire living from farming and Small-scale commercial farmers as those that tend always to have been market-oriented and make a living from selling their output.

Gebreselassie and Sharp (2008) sub divided Smallholder family farms into; (Type A) which involves farmers in remote, drought-prone or low-potential areas, generally regarded as "subsistence-oriented" but in fact interacting with markets both as buyers and as sellers. The policy challenge posed by these farmers is to improve their terms of engagement with markets, as well as raising productivity and diversifying livelihoods and (Type B) Small farmers who are already market-oriented, producing crops partly or wholly for sale alongside crops for their own consumption. They further explain that such farmers tend to be in locations with favourable growing and marketing conditions, and tend to focus on specific high-value commodities.

According to the NAADS programme implementation manual (2001), commercialisation is part of NAADS principles and is stated to be inclusive of intensification of productivity and specialisation. It further states that to facilitate commercialisation of the agricultural sector, the Secretariat will collect, collate, analyse and disseminate market, meteorological, research and other relevant information. In addition, from time to time the Secretariat will undertake commodity and market studies, and disseminate the results and recommendations of the studies to the Districts and Sub-Counties, for further dissemination to farmers.

The brochure "NAADS Components under ATAAS" enlists commercialising model farmers as one of the three categories of farmers that would be supported through Public Private Partnerships and along value chains. In the brochure, a commercialising model farmer clearly practices commercial farming through enterprise specialisation or enterprise mix and has clear market linkages as well as linkages with support services like financial institutions. She/he is willing to provide technical marketing and business services to members of his/her group.

Jaffee, Henson, Rios (2011) state that smallholder farmers are seen as a valuable asset in terms of managing/spreading crop production risks and building flexibility into the procurement system. They further explain that spreading production among smallholders (perhaps in different geographical areas) helps to mitigate the supply shocks from certain weather events or outbreaks of pests and diseases. Jaffee, Henson, Rios further explain that contracting with smallholders also allows for some (rapid) adjustments in the quantities supplied/purchased. They further explain that smallholders are considered cost-effective suppliers and generally able to meet quality requirements. They however added that in contrast, smallholders are perceived to be weaker in terms of adjusting production practices, in record keeping, in communication, in matching specific quantity requirements, and in the consistent application of good agricultural practices.

According to Leavy and Poulton, although there are debates about the future viability of small farms (Hazell et al.2007), the official policies of many national governments and international development agencies accord a central role to the intensification and commercialisation of smallholder agriculture as a means of achieving poverty reduction. They further stated that according to this thinking, smallholder agriculture is uniquely positioned to deliver broad-based growth in rural areas (where the vast majority of the world's poor still live). They further state that however, others fear that strategies for commercialising agriculture will not bring benefits to the majority of rural households, either directly or (in the view of some) at all. Instead, they fear that efforts to promote a more commercial agriculture will benefit primarily large-scale farms. At best, the top minority of smallholders will be able to benefit.

Leavy and Poulton, concluded that large-scale farms may be able to prosper even with an ineffective or non-performing Ministry of Agriculture, but smallholders need the services that the Ministry of Agriculture is supposed to be responsible for. In addition to this, they stated that Historically, Ministries of Agriculture have seen their role to be that of providing services which have rarely reached more than a tiny minority of largely privileged, well-connected farmers. Instead, their role should be to support decentralised service provision and local coordination mechanisms (effectively, providing a technical input into processes that are actually focused on local government)

Poole, Chitundu, and Msoni (2013) state that the World Bank's World Development Report (WDR) 'Agriculture for Development' (2007) drew attention to the importance for sustainable development and global poverty reduction of investing in agriculture, particularly among smallholders in developing countries. They added that for Sub-Saharan Africa, which is mostly agriculture-based, the WDR argued that growth will happen through investment where the agricultural potential is medium to high, while at the same time ensuring the livelihoods and food security of subsistence farmers: 'Getting agriculture moving requires improving access to markets and developing modern market chains. It requires a smallholder based productivity revolution...' (p.20). The aim is to achieve sustainable development and poverty reduction through the development of commercial agriculture. According to Poole, Chitundu and Msoni another World Bank report, Awakening Africa's Sleeping Giant (World Bank, 2009) argued that, 'for the foreseeable future, reducing poverty in Africa will depend largely on stimulating agricultural growth'. In addition, they stated that the basis for optimism about poverty reduction is that within more favoured agricultural areas and for a range of commodities, African agricultural smallholders can be internationally competitive.

According to Poole, Chitundu, and Msoni, since the Enlightenment rationalism and modernism have been the 'metanarrative', or overarching interpretative framework explaining knowledge and experience. They further stated that the methodology of the WDR is a meta-analysis. They in addition stated that the emphasis of 'Agriculture for Development' (2007) is on commercialisation as a metanarrative for developing country agriculture and poverty reduction – both modernising in the sense of development theory, and modernist in the sense of underlying philosophy. It assumes rather than questions the essential attractiveness of market incentives and profit maximisation, whereas for many people in developing countries, agriculture is on the one hand more than a question of economics and on the other often is not perceived to be an 'attractive' profession (International Fund for Agricultural Development, 2011).

Poole, Chitundu and Msoni state that their research provides no reassurance that those smallholders will respond automatically to initiatives to promote commercialisation and growth of the sector. They further explained that the local context and farmer characteristics and attitudes need to be much better understood in order address the strengths and weaknesses of the sector participants and the opportunities and threats of the external environment.

Poole, Chitundu, and Msoni stated that human capital is more complicated still. They explained that conceptual space must be made to include individual and collective attitudes and aptitudes on which household strategies are founded. They further explained that understanding attitudes and value systems cannot be achieved without qualitative methods and heterodox conceptual frameworks: other disciplines including sociology, anthropology and psychology, and 'hetero-methodological' approaches are needed to supplement or

supplant mainstream development economics, in order to get inside the 'hearts and minds' of smallholder farmers. In addition to that they further stated that expanding commercial agriculture requires a decided mindset: a commitment to farming and new technologies, a low threshold of risk aversion, willingness to invest in land and soils, access to finance, skills in managing business relations, price negotiation, time spent in markets, product and process quality control and assurance, continuous improvement and efficiency enhancement. They further explained that also, collective activity with the inherent operational and management challenges is necessary for minimising transaction and trans-formation costs, and involves significant individual and organisational learning.

Poole, Chitundu, and Msoni concluded commercialising metanarrative is much riskier than subsistence farming, rural wage labour and/or migration, and may not be an attractive profession. They further explained that this conclusion is not a rejection of rural restructuring, or of policies to promote commercial smallholder agriculture, or of policies to ease out of agriculture rural people who want another profession. Structural change is inevitable and necessary, and meta-analyses are important tools for scenario planning and development design. But as value systems and policies of major international development players vary, so too do they differ from the value systems particular to local cultures, communities and individuals.

They further stated that finally, agricultural development policies and development organisations must consider market access, but also its corollary, exclusion.

According to Poole, Chitundu, and Msoni, smallholder commercialisation may lead to agricultural development and improved productivity that is so important for Africa but it will not guarantee poverty reduction. They stated that in regard to strategic orientation, therefore,

further research is necessary to understand rural heterogeneity and, in the bigger development picture, the phenomenon of rural 'livelihood migration' out of farming, be-fore appropriate intervention targeting is possible: which individuals and households are pushed out farming, or how much they are positively pulled out of farming and into another, such as wage labour? What of the gender and age issues in household food production, and agricultural commercialisation?

Intervening organisations have a moral responsibility for the target population and also for those who are excluded. It is not enough to hope that local labour markets and urban development can absorb the 'rural resources' which are 'surplus' to an agricultural commercialisation metanarrative – these are real people with traditions and culture and support networks which need to be taken into account. This ethical dimension, absent hitherto in many policy debates and intervention targeting, raises important issues of equity that are now coming to the forefront of thinking about growth policies post 2015.

Kopainsky, Tröger, Derwisch and Ulli-Beer (2012) state that seed from improved varieties and other agricultural inputs, such as fertilizer and crop protection products, are imperative to the transformation of the agricultural sector from subsistence farming to small-scale commercial agriculture. They further state that trust building in improved seed is crucial for the transformation towards small-scale commercial agriculture, which also involves the development of adequate skills, that is, of new farming practices. Kopainsky, Tröger, Derwisch and Ulli-Beer also stated that capturing the transition process from the subsistence to the small-scale commercial farming regime and supporting the transition with adequate policy instruments requires a dynamic perspective and a socio-technical policy analysis framework that integrates utility evaluations and social dynamics. They further state that skills regarding improved seed support the transformation to small-scale commercial

agriculture and that trust could thus be identified as important policy lever. They explained that the trust-building process plays a central role in smoothing short-term changes in input costs that would lead to major fluctuations in adoption if adoption was a purely utility-driven decision-making process. They further explain that this smoothing gives time for developing the required skills to better realize the high yield potential of improved seed.

Gebreselassie and Sharp (2008) explain that commercialisation of agriculture is not an end in itself for farmers, but an intermediate outcome on the way to welfare goals. They further explain that their initial results of their research suggest that commercialisation of smallholder agriculture should be encouraged not only as a means to boost exports and to stimulate or monetize local economies, but also as a way to help smallholders achieve welfare goals.

2.2 Food security and Performance of Small scale Farmers

The Food and Agricultural Organization (FAO) defines food security as a condition where "… all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Beckford, Campbell and Barker, 2011). They noted that four broad dimensions of food security are usually identified: availability—the supply of food in an area, access—the physical and economic ability of people to obtain food, utilization—the proper consumption of food and stability—the sustainability of food supplies. Food insecurity is the absence of food security implying that hunger exists as a result of problems with availability, access and utilization or that there is susceptibility to hunger in the future.

Food security consequences are a particular concern as hundreds of millions of people who already struggle to get by may be faced with more frequent droughts, flooding and heat waves that can devastate crop harvests (Kopainsky ,Tröger, Derwisch and Ulli-Beer, 2012). They also add that the reductions in yield in some African countries could be as much as 50% by 2020, and net crop revenues could fall by 90% by 2100 (Bokoet al., 2007). Agriculture in developing countries thus faces the challenge of undergoing a considerable transformation to meet the challenges of achieving food security and responding to climate change (FAO, 2010)

Household security is considered the foundation on which agricultural commercialization is being built (NAADS Implementation Guidelines, 2010). It also states that in order to accelerate agricultural commercialization, there was need to attain mass household food security across the country. It noted that to achieve this in the short run, NAADS provides improved planting and stocking materials to as many households as possible for both multiplication and consumption. To reach as many households and alleviate mass poverty, household food security is pursued through the *Village Farmer Forum (VFF)* which is constituted of all members of farmer groups in the village (NAADS Implementation Guidelines, 2010). It further explains that the farmer groups within VFF provide the basis for planning for food security and mass poverty alleviation as well as households access to improved planting and stocking materials.

Kabwe and Donovan (2011) state that research in their region of research and elsewhere indicates that those who adopt conservation farming methods have the potential to reduce their costs, increase their yields, reduce food security risks, minimize the chances of crop failures in drought years, increase their profits, and in time improve the fertility of their land.

According to Food and Agriculture Organization (2000), it is when the household's overall income is sufficiently high to afford non-staple foods that the household truly enjoys food security and adequate nutritional status (Manu, Fialor and Issahaku, 2012). Manu, Fialor and Issahaku state that the results of their study suggested that both participation and household income had decreasing effects on the coping index of the household and therefore positively influence food security. Manu, Fialor and Issahaku observed that participation and household income had a negative effect on food insecurity coping index which implied that, participants felt more secured in terms of food security compared to non-participant. They however state that the larger households felt more food insecure than smaller households since household size had a positive effect on the coping index of the households.

Kopainsky, Tröger, Derwisch and Ulli-Beer (2012) state that seed from improved varieties and other inputs are imperative to the transformation of the agricultural sector from subsistence farming to small-scale commercial agriculture and thus to increasing food security on the continent. They noted that quality seed can play a critical role in increasing agricultural productivity and, thus, food security as well as farmer incomes. They explained that quality determines the upper limit of crop yields and the productivity of all other agricultural inputs into the farming system (Maredia et al., 1999).

Beckford, Campbell and Barker (2011) conclude their study by making the point here that sustainable agriculture in Jamaica and other resource poor farming environments must be linked to a broader mission of economic and social change. They also noted that food security and rural livelihoods should be fundamental in agricultural planning and it is important for vulnerable small-scale food producers to realize that the goals of food security and reduction of food poverty are not incompatible with sustainable agriculture.

Alavi with Htenas, Kopicki, Shepherd, and Clarete (2012) state that the U.S. Agency for International Development has been helping agriculture and forestry ministers explore the potential of the private sec-tor in strengthening regional food security. They note that for ASEAN authorities, and not for them alone, the reliability of rice supplies and prices amounts to a critical test of their abilities to provide their citizens with food security. As a formal matter, all AMSs have adopted the World Food Summit 1996 statement that "food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (World Food Summit 1996).

CUMULATIVE PROGRESS REPORT FY 2011/2012-2012/2013 of NAADS states that ATAAS introduces new elements in agricultural research and agricultural advisory/extension systems aimed at improving efficiency and effectiveness of the systems as well as broadening the scope of interventions, particularly in the case of NAADS of which was addressing the limited focus of agricultural advisory services through diversification and value addition, embracing a commodity-based approach, promoting a public-private partnership and supporting interventions to control major tropical plant diseases that are threatening food security and incomes (*Banana Bacterial Wilt, Cassava Brown Streak Virus). It adds that one of the sub components of the research was Technology Uptake Grants and the planned activities under this sub component were; technology multiplication through market oriented model farmers including the use of challenge fund as well as technology multiplication through promotion of food security farmers.

There however challenges of which is the new approach of support of farmers (food security farmers) which has led to loss of group cohesion and some group phasing out in Hoima.

Smale, Byerlee and Jayne (2011) states that policy experiments during the past 15 years since structural adjustment have ranged between two extremes. Consistent with the tenets of structural adjustment, governments such as those of Mozambique and Uganda have relied primarily on markets and regulated trade in order to coordinate food production and marketing. They noted that by contrast, governments in Malawi and Zambia have revived the ―development state‖ concepts of the 1970s in order to promote national food security (Kydd 2009). They expressed that to create space for private markets to operate, governments need a predictable, well-defined food security strategy that is implemented sequentially. For example, blanket subsidies and restrictions on grain trade, such as pan-territorial and pan-seasonal prices, would need to be removed for private traders to have an incentive to store and move grain from surplus to deficit areas. They also added that maize remains crucial for food security in Sub-Saharan Africa. They explained in some regions, the predominance of the crop in farming systems and diets implies that yield gains have the potential to jump-start a Green Revolution like those experienced in Asia for rice and wheat. They expressed that however, despite episodes of success, the evidence compiled here suggests that very little progress has been made toward achieving this potential since Byerlee and Eicher‘s (1997) review. Moreover, while maize remains the most important food security crop for millions of rural households, chronic food insecurity persists even where progress in maize production has been achieved, as in Malawi and Ethiopia (Smale, Byerlee and Jayne, 2011).

Leavy and Poulton (2007) express indeed, without increasing crop income and improving food security in Sub-Saharan Africa, farmers will not be able to afford to send their children to schools and allocate more time to non-farm activities (Otsuka and Yamano 2006, p.30, emphasis added).

There are two main strands of literature that investigate the relationship between subsistence and commercial agricultural production among smallholders (Leavy and Poulton, 2007). They state that the first concerns the impacts of cash crop production on food security and nutrition. They state that NGO and other critics of the promotion of cash crops have argued that cash crop production absorbs women's labour and may also justify men taking over land previously controlled by women. They explain that it thereby diverts these resources from food production for household consumption. Meanwhile, the resulting income is controlled by men, who prioritise personal consumption (e.g. of alcohol), marrying other wives or investment in fixed assets, rather than providing for the household's immediate food and nutritional needs (Leavy and Poulton 2007). They further explain that while this first strand of literature examines the impact of commercial agricultural production on the food security of those who have already engaged in it, the second considers whether household concerns about food security act as a constraint to adoption of commercial agriculture. They stressed that specifically, if food markets are unreliable, inefficient or highly volatile, it is argued that farm households will prioritise feeding themselves and hence will only cultivate very small quantities of crops intended for sale if they expect to experience a food deficit (Fafchamps, 1992; Jayne, 1994). They noted that thus, under production conditions better suited to oil crops than to grains, Jayne (1994) found that, 'Controlling for differences in household assets and location, grain-surplus households in five semi-arid regions of Zimbabwe were found to cultivate 48% more oilseed crops for the market than their grain-deficit neighbours' (p388). They expressed that indeed, if adoption of a cash crop only occurs when concerns related to

food security can be allayed, then non-negative outcomes of cash crop production on food security are likely to be observed.

According to Leavy and Poulton (2007), Pandey et al. (2006) argue that, Rice productivity improvement can thus be an important strategy for escaping from poverty while assuring food security. Pandey et al. explain that improvements in household food security can thus facilitate and reinforce the process of commercialization rather than negating this process, as is believed in some policy circles. [Contrary to these same beliefs] ... a more gradual approach that is based on enhancing food security first before launching a major commercialization program for uplands is likely to be more successful in bringing about the desired change (von Braun and Kennedy 1994). They state that examples abound where commercialization programs that did not give due consideration to food security have performed poorly in the uplands of Vietnam and elsewhere (p77).

Chirwa and Matita (2012) state that household food security also increases the probability of participation, suggesting that when food markets are unstable, farmers that are not food secure may be constrained in their attempt to commercialize their farming systems. Furthermore, we find that the degree of commercialisation is negatively associated with age and household size but positively associated with food security, access to fertilizers, NASFAM business orientation and market access benefits (Chirwa and Matita, 2012). They further expressed that poor households often sell early in the season when prices are at their lowest, and buy in the deficit season from markets when prices are highest (Omiti et al., 2009). They note that this may threaten their food security and discourage them from greater commercialization. Chirwa and Matita further express that the role of food security in the commercialisation of smallholder agriculture is also evident from the results of their research,

the coefficient of food security being statistically significant at the 5 percent level. This shows that households that revealed that they had 'more than adequate food for household needs' in the 2008/09 season on average are 0.09 points more commercialized than those that were food insecure

2.3 Market access and Performance of Small scale Farmers

Tuan (2012) states that the term small-scale farmers are used quite loose, to denote two characteristics, having limited farming area and not having the resources to invest in expanding the farming practice on their own. These households are typically average to poor house-holds in a community.

Leavy and Poulton (2007) defines small-scale farmers in two types; Small-scale "non-commercial" farmers – might sell some produce but do not or cannot make their entire living from farming (Type A) and Small-scale commercial farmers – tend always to have been market-oriented and make a living from selling their output (Type B).

In agreement and with reference to Leavy and Poulton (2007), Gebreselassie and Sharp, 2008 defines smallholder family farms in two types; (Type A) Farmers in remote, drought-prone or low-potential areas, generally regarded as "subsistence-oriented" but in fact interacting with markets both as buyers and as sellers. The policy challenge posed by these farmers is to improve their terms of engagement with markets, as well as raising productivity and diversifying livelihoods and (Type B) Small farmers who are already market-oriented, producing crops partly or wholly for sale alongside crops for their own consumption. Such farmers tend to be in locations with favourable growing and marketing conditions, and tend to focus on specific high-value commodities

According to Jaffee, Henson, Rios (2011), market access has been identified as one of the foremost factors influencing the performance of small-scale producers in developing countries, and in particular least-developed countries. They further explain that smallholder access to markets for higher-value or differentiated agricultural and food products (hereafter HVAF) is recognized as a vital opportunity to enhance and diversify the livelihoods of lower-income farm households and reduce rural poverty more generally (World Bank 2007a).

The brochure "NAADS Components under ATAAS" lists 'agribusiness development for enhanced market access as one of the NAADS components under ATAAS. The brochure explains that the aim of agribusiness is to accelerate the process of sustainable agricultural commercialisation in the country through improved market access. It further explains that the agribusiness component extends the NAADS scope from production constraints along the value chains.

Leavy and Poulton, 2007 state that the widespread commercialisation of agriculture might only come with improved market access, allowing both purchases of staples and opportunities to sell crops more suited to local growing conditions.

Jaffee, Henson, Rios (2011) state that smallholder participation in HVAF markets is typically constrained by inadequate farm-level resources, farm-to-market logistical bottlenecks, and more general transaction costs in matching and aggregating dispersed supplies to meet buyer and consumer demand. Jaffee, Henson, Rios, further explain that these traditional constraints have been amplified and, in some cases, surpassed by a new set of challenges associated with compliance with product and process standards—set and enforced by governments as well as private supply-chain leaders. Jaffee, Henson, Rios (2011) further explain that in many

contexts, there remains unfinished business in addressing the old constraints to remunerative smallholder participation in markets—those constraints related to basic infrastructure, farmer organizations, access to finance, and so forth. They state that these constraints have not disappeared as the new realities of stricter standards have set in. They further stated that for governments, private companies, and development partners, the challenge of smallholder integration to markets still lies in supporting gradual upgrades, helping farmers to move progressively along a continuum of improvements, and being linked to value chains for which they can meet downstream and consumer requirements, on a remunerative basis and with a manageable degree of risk.

Smale, Byerlee, and Jayne further state that physical access to markets is far more restricted for farmers in Sub-Saharan Africa than for farmers in other regions of the developing rural world. They further stated that only a quarter of farmers in Sub-Saharan Africa are within 2 hours of markets by motorized transport, as compared to nearly half of farmers in Asia and the Pacific, and 43% for the developing rural world. They added that an estimated 75% of farmers are located more than 4 hours to the nearest market, by motorized transport, as compared to 45% in Asia and the Pacific (Kate Sebastian, pers. comm). They further explained that most rural people in Sub-Saharan Africa have no access to motorized transport, so these figures understate the magnitude of the problem.

Smale, Byerlee and Jayne (2011) state that expanding markets in densely-populated areas with small-scale farms will require different approaches from areas with good potential, scattered populations and lower intensity of land use. They added that designing interventions to support market development will require persistent and careful monitoring of ongoing policy experiments.

Smale, Byerlee, and Jayne further state that few countries in Sub-Saharan Africa are competitive in global markets for exports, largely because of high transport and logistics costs; for the same reasons, most countries are competitive for import substitution. They further state given both greater productivity and improved infrastructure, the expansion of regional markets could eventually provide the basis for competition in export markets (World Bank, 2009).

Given the centrality of participation in output markets in our definitions of commercialisation, market access is obviously crucial to commercialisation (Leavy and Poulton, 2007). They further explained through the example of Heltberg's study of smallholder farmers in Mozambique which finds "to stimulate commercialisation the most important factors appear to be improved access to markets and information, risk reduction, capital accumulation" (Heltberg, 2001). They explain that market links bring broader benefits to poor people in rural areas, and there is plenty of evidence for this (see Dercon and Hoddinott, 2005, among others). They however argue that households have different relations to markets because of costs associated with market transactions. Leavy and Poulton state that the key is enabling farmers to access markets for their produce – as evidenced by the various 'making markets work for the poor' initiatives that emphasise market access as a major pathway out of poverty and the need to link farmers more effectively to new markets (DFID, 2000; Asian Development Bank; Commission for Africa report, 2005; SIDA, 2003; World Bank World Development Report, 2000/2001, Chapter 10, "Making markets work better for poor people"; Almond and Hainsworth, 2005). In addition they stressed that these stress the importance of agricultural growth, but also highlight infrastructure development as necessary to improve access to new markets, as well as bringing other benefits to improve welfare overall. Leavy and Poulton added that the other aspects of the current orthodoxy include

better market information, strengthening farmer organisations and promoting contract farming. They however added that while many measures implemented in support of increasing market access have value in their own right, there are still questions around who participates. Will it still only be the top few per cent of farmers who respond, especially if, on the whole, smallholders cannot either buy their food reliably and cheaply from the market or intensify their own production (Leavy and Poulton, 2007)?

Leavy and Poulton further state that successes in various initiatives that fall under the banners of "making markets work" for poor people and "linking farmers to markets" have been mixed. They further express that case studies from the DFID/ADB joint initiative focusing on financial, labour, and agricultural markets, and public–private partnerships, include contract farming schemes and other measures to encourage value chain participation by smallholder farmers, mainly in East and South-East Asia. They further expressed that contract farming schemes implemented in Cambodia encompass production of oranges, vegetables, rubber, tobacco and rice, with the aim to provide to smallholder farmers with: price information; new technologies; lower costs of entering the market; and access to credit. They however add that of three schemes, two failed (CEDAC, an NGO supported scheme, and AADA, under a local farmer association) because of weak market linkages – even though AADA managed to increase productivity 5-fold. They on the hand state that the third scheme - Angkor Kasekam Roungroeung (AKR) – is a rice contract farming scheme of more than 1,000 households. They further explain that benefits of the scheme have been to increase specialisation and the adoption of new production methods, as well as access to a stable market and secure income. They further express that participating farmers received higher prices than in the market and on the whole felt that they were better off as a result. They explain that however, the scheme has excluded poorer farmers with smaller farm sizes.

A study by Minten, Randrianarison and Swinnen (2005) of smallholder farmers contracted to supply local supermarkets describes how smallholder farmers under micro-production contracts, have received extensive farm assistance and supervision to help them meet the high quality standards and food safety requirements demanded by European supermarkets (Leavy and Poulton, 2007). They add that under the scheme almost 10,000 vegetable farmers in Madagascar are now producing for this market. They also high light that the benefits of the scheme include higher welfare, greater income stability and shorter lean periods. They also mention that however, local market opportunities have been slow in coming, not least because local supermarkets do not demand the same high quality and are reticent about contracts that emphasise higher quality standards.

What are the characteristics of participating farmers (Leavy and Poulton, 2007)? Their answer to their question was that the contracting farm households tend to be considerably more highly educated than the average Malagasy household: 'The households that have contracts with the firm are: 64 per cent of them had finished primary schools, and only 1 per cent of them did not do any studies at all. This compares to almost half of the national population that is analphabet' (Minten et al., 2005:9). Leavy and Poulton, 2007 further explain that an area under contract is restricted to 0.01 hectare, but given the relatively short production cycles there can be many different contracts on the same plot over the course of the year. They further explain that usually there is only one contractor per household, and contractors can have only one contract at a time, but multiple household members can have contracts concurrently. They add that households also subcontract land to people outside the household.

Leavy and Poulton, 2007 high light that on a much smaller scale, smallholder farmers in South Africa have been supplying a local SPAR supermarket, while SPAR supports and maintains market access. They further express that the initiative is underpinned by South

Africa's Agricultural Black Empowerment (AgriBEE) Policy, introduced in 2004. They note that these smallholder farmers are classified as emerging farmers, and meet 30 per cent of the store's demand for fresh produce, supplying cabbages, spinach and other vegetables. They however state that its reach is limited in that it amounts to only 27 farmers in total (Louw et al., 2006), especially given that there are about 3 million small-scale farmers in South Africa. They noted that these farmers are mainly settled in communal areas and farming only 14 per cent of agricultural land, compared with 46,000 commercial farms, which produce 95 per cent of marketed surplus on 86 per cent of agricultural land (Sautier et al., 2006: 9). Participation of small-scale farmers in contract farming is still very limited.

Leavy and Poulton explain that an empirical analysis of the impact of a contract-farming programme (ARB) in Senegal examines poorer community members' access to contracts and the programme's impact on participants‟ incomes (Warning and Key, 2005). They further express that contracting farmers' incomes significantly increased, which not only raises the standard of living of growers, but the authors suggest this may also create positive multiplier effects for economic growth, infrastructure and employment in the region.

In agreement, Tuan (2012) states that in Vietnam and other countries; there have been a lot of previous researches on contract farming. He notes that most of them have shown that contract farming could provide small scale farmers with better access to the market, better access to production inputs, ability to mitigate the risk, assuring higher returns and offering dispute solutions for parties involved. Tuan states that contract farming can be defined as "an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices" [Eaton and Shepherd 2001, p. 2]. He explains that contracts are often initiated by agribusiness firms (processors, traders), which undertake backward linkages by forming

alliances with groups of smallholders and, through written or verbal agreement, specifying provision of farm inputs such as credit and extension in return for guaranteed delivery of products with specific quality often at predetermined prices. In addition, Tuan states that contract farming is typically used to organize production of perishable, high-value commodities for a quality-sensitive market [Minot 1986]. He also notes that Contract farming is typically used to organize production of perishable, high-value commodities for a quality-sensitive market [Minot 1986]. According to Tuan (2012), Bijman [2008] reviewed the literature on contract farming also noted the inducement of contract farming by development agencies to link farmers to the market.

The study also finds no significant difference in wealth levels between contract and non-contract farmers, and therefore does not seem to favour "wealthy" farmers over their poorer neighbours (Leavy and Poulton, 2007). They explain that the reason put forward for this is that the programme focuses on producing a traditional cash crop, peanuts that all farmers in the locality have grown before and already have the agricultural inputs to cultivate, rather than non-traditional crops that have limited markets locally. They further express that not only is there less uncertainty around producing the crop, no new large capital investments are needed to participate. They sum up that this creates more of a level playing field between larger and smaller farmers (Warning and Key, 2005).

According to Leavy and Poulton, Porter and Phillips-Howard (1997) evaluation highlights how important socioeconomic context is in determining success or failure of contract farming schemes, in particular the relative balance of power between large companies and small-scale farmers. Citing work by Glover and Kusterer (1990), Leavy and Poulton state that "ownership" by contracting farmers and farmer–company relations and communication are

fundamental. A key element in successful schemes is effective liaison between firm and farmers that takes account of language needs and cultural understanding, including gender-related issues. The most successful liaison and extension is when companies employ people of the same ethnic background as the contracted farmers, and female extension officers. Representativeness of farmers‟ organisations is another element contributing to increasing power of smallholder farmers under contract; where there have been strong local farmers‟ organisations; farmers have successfully influenced scheme policy (Leavy and Poulton, 2007).

They add that other important factors which help to put farmers in a stronger position vis à vis the contracting company, allowing them to negotiate more effectively and maintain independence, include: having alternative livelihood and income-generating activities alongside the scheme; previous experience of interacting and working with other large companies; land tenure; and control over water supplies for irrigation (Porter and Phillips-Howard, 1997).

They note that contract farming can have impacts or multiplier effects on non-contract farmers and other actors in the locality, which may not always be beneficial (Singh, 2002; Porter & Phillips-Howard, 1995). They also add that some studies have found that producing for contract can shift farm production towards export-oriented and cash crops. This is at the expense of basic food crops, potentially leading to higher prices. They explain that these are especially felt by those whose incomes have not increased as a direct result of contracting, such as non-contract farmers and labourers (Little & Watts, 1994, cited in Porter & Phillips-Howard, 1995).

They explain that these cases illustrate that while market access initiatives are valuable with many benefits to participating farmers, in practice relatively few are able to participate in what, on the whole, tend to be niche markets. They also add that only the top few per cent of

smallholder farmers can actually benefit highlights the limitations of conventional thinking if it is decoupled from support for staples development. They conclude that this is always going to hold back their ability to diversify out.

Similarly, Poole, Chitundu and Msoni, 2013 agricultural development policies and development organisations must consider market access, but also its corollary, exclusion. They further express that intervening organisations have a moral responsibility for the target population and also for those who are excluded. They also note that it is not enough to hope that local labour markets and urban development can absorb the 'rural resources' which are 'surplus' to an agricultural commercialisation metanarrative – these are real people with traditions and culture and support networks which need to be taken into account. They explain that this ethical dimension, absent hitherto in many policy debates and intervention targeting, raises important issues of equity that are now coming to the forefront of thinking about growth policies post 2015.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that will be used to carry out the topic of study. This will be summarised in the research design, study area, study population, sample size, sampling procedure, data collection and data analysis. The following instruments were used; interviews, questionnaires, Focus Group Discussions (FGDs) and observation

3.1 Research design

The study employed a case-study research design using both the qualitative and quantitative approaches. This design was chosen in order to provide information on this particular study and also have in-depth study in the area under investigation, that is, Kamukuzi division. The qualitative approach was used in order to investigate deeply into the phenomenon under study and quantitative approach was used in order to quantify the results and relating them to the larger population. The time dimension used was the cross sectional research due to the limited time period.

3.2 Area of the study

The study was carried out in Kamukuzi Sub County, Mbarara district. Mbarara district is located in the South-Western region of Uganda. The reason for selecting this area of study was that it has NAADS and it has small scale farmers. The other reason for selecting this area of study was that since it is researcher's home district, it was easier for him to sample the study population because he is conversant with the area population. The researcher being a native Runyankore speaker was an added advantage, as it made communication with the researcher's respondents easier.

3.3 Study Population

The study population was the population under the researcher's study which amounted to 132 people. The study population included the 1 district coordinator and 1 division NAADS coordinators, 2 service providers, 10 model farmers and 118 food security farmers who form the NAADS programme in Kamukuzi division in Mbarara district (Mbarara NAADS coordinator, 2014).`

3.4 Sampling Procedures

3.4.1Sample Size

The researcher used non-probability sampling to come up with the number of respondents for the study as 103 using the table for determining sample size from a given population (Krejice and Morgan, 1970). The researcher checked for the corresponding sample size of the study population 132 and found out it was 103.

3.4.2 Sampling Techniques

The researcher used stratified random sampling to divide the population into smaller groups called strata. The strata included facilitators, that is, the coordinators and service providers and the beneficiaries that is the model farmers and the food security farmers from Kamukuzi division. The researcher formed the strata basing on the members shared attributes and characteristics.. The researcher used purposive sampling to select different types of farmers and service providers for example both service providers had to be among the respondents as one deals in crops and the other animals. The researcher ensured that part of the total farmer respondents included the model farmers since they are a limited number and have alot of expertise on NAADS. This helped the researcher to come up with a balanced number of

respondents. Using proportions, the researcher divided the sample size into the strata as presented in the table below;

RESPONDENTS	N	S
Facilitators	4	4
Beneficiaries	128	99
TOTALS	132	103

3.5 Data Collection Methods

The researcher used qualitative methods of data collection. The qualitative methods gave the respondents the opportunity to give information on the role of NAADS on performance of small scale farmers. The data collection methods used include; interviews, Focus Group Discussions, documentary analysis and observation and the data instruments included questionnaires which were composed of both closed ended and open ended questions.

3.5.1Questionnaires

A closed ended questionnaire was used by the researcher to limit the respondents with a list of answer choices from which they might choose to answer the question. Some questions answers were limited to yes and no answers and other questions limited to strongly disagree, disagree, neutral, agree and strongly agree. The researcher ranked the responses as; yes 1, no 2, strongly disagree 1, disagree 2, neutral 3, agree 4 and strongly agree 5.

3.5.2 Interview guide

Interviews helped the researcher to get in depth data and dig out further information that would not be collected using other methods. Interview guides were used to obtain information from farmers both the model farmers and the food security farmers. Face-to-face discussions were conducted in English with the modal farmers. The model farmers were

interviewed to find out about the performance of small scale farmers and how it relates with the role of NAADS in Kamukuzi division.

3.5.3 Observation

Observation guide was used for observable aspects like the NAADS benefits and enterprises from various farming categories such poultry, piggery, goats and mush rooms. Data observed was stored on a camera by taking photographs of what was observed.

3.6 Quality Control

3.6.1 Validity

Validity as a quality control was recommended by my supervisor for the dissertation. The instruments were given to NAADS district officers and my dissertation supervisor who were required to comment on the clarity of the instruments and their ability to produce accurate data. Necessary adjustments were made on the data collection instruments that had some inaccuracies that couldn't help the researcher achieve her objectives to make the instruments ready for use during collection.

3.6.2 Reliability

The questionnaire was piloted among 15 respondents that are purposively selected. The selected respondents are asked to answer the questionnaires from which the researcher determines the necessary and relevant questionnaires before the study that enable the researcher to get the information they intend to collect on the study. This helped to promote consistency in the research.

3.8 Data Analysis

Both quantitative and qualitative methods of data analysis were used. After the data was collected, it was analysed. Quantitative data was compared and reduced into tables, figures, graphs and percentages. SPSS, STATA and EXCEL were used in the analysis of quantitative data. On the other hand, Qualitative method of data analysis was analysed through editing, coding, descriptions were to come up with narratives.

3.9 Ethical Consideration

The researcher considered ethical issues by getting an introductory letter from Uganda Martyrs University, Nkozi and thus getting a go ahead to carry out the research.

The researcher also considered ethical issues by recognising authors through citation.

The researcher also considered ethical issues by keeping the information given to her by her respondents confidential as promised by the researcher to the respondents.

The researcher also considered ethical issues through compliance with formalities such as asking the NAADS officials for approval to carry out.

3.10 Limitations of the study

The case study chosen may not be able represent the whole. This study was carried out to generate conclusions on the whole of the NAADS role on the performance of small scale farmers basing on just one sub-county. There case study may therefore lack representativeness.

The samples chosen during the research may not be able to represent the full research population under study

Nevertheless, the limitations mentioned above did not render the study worthless. Findings were worthwhile due to the use of both qualitative and quantitative methods to carry out the study, and the advantage of the different data sources, data collection methods, and the trust in the sources.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents the findings of the study on the role of National Agricultural Advisory Services (NAADS) programme on performance of small scale farmers. The results presented are in relation to the objectives stated in chapter one, that is, to examine the relationship between commercialization of agriculture and the performance of small scale farmers, to assess the relationship between food security and the performance of small scale farmers and to evaluate the relationship between market access and the performance of small scale farmers. The responses obtained from respondents were compiled and analyzed with the help of interviews, questionnaires to the respondents (NAADS beneficiary farmers, NAADS coordinators and NAADS service providers), and what the researcher had observed from the field.

4.1 Background information of the respondents

The NAADS facilitators (The district NAADS coordinator, the division NAADS coordinator, service providers) and NAADS beneficiaries of Kamukuzi division, Mbarara municipality were the respondents during the research. The NAADS facilitators were given questionnaires and the NAADS beneficiaries interviewed on the topic, "The role of National Agricultural Advisory Services (NAADS) programme on performance of small scale farmers." The researcher also observed the practices of the respondents to gather information on the topic. Part of the back ground information asked to the respondents (the facilitators) included their gender, age group and their level of education. The researcher issued out only 4 questionnaires which were to the NAADS facilitators. All the 4 questionnaires were received back by the researcher. The researcher also managed to interview all the 99 NAADS

beneficiaries. This analysis was therefore based on the 103 responses from both the NAADS facilitators and the NAADS beneficiaries.

4.1.1 Findings on gender characteristics of respondents

Table 4.1.1: Table Showing Sex Distribution of Respondents

	NAADS beneficiaries		**NAADS facilitators**			
Sex	Freque ncy	Percentage	Frequency	Percentage	**Total**	**percentages**
Male	37	37.4	3	75	40	38.8
Female	62	62.6	1	25	63	61.2
Total	**99**	**100**	**4**	**100**	**103**	**100**

***Source**: Primary data*

The table above shows that there were more female respondents (61.2%) than male ones (38.8%). Generally there were more females than males. However, there were more males in the NAADS facilitators (75%) than females (25%). This implies that the higher percentage of women was among the NAADS beneficiaries (62.6%) where the men had a percentage of 37.4%. Interest was picked in trying to establish the reason for this female dominance. Basing on the NAADS implementation guidelines (2010), the researcher noted that the NAADS implementation guidelines emphasize the involvement of women in the NAADS programme.

However, notwithstanding this reason, female respondents during interviews noted that men are not actively involved in NAADS programme activities because some are engaged in what they called more ‘profitable and productive’ income-generating activities such as trading, and white collar jobs. They explained that the males are the bread winners and therefore go for jobs where they are assured of a particular sum of money every period. This agrees with what

Leavy and Poulton (2007) point out, that is, as farm production becomes increasingly business-oriented, rather than a matter of survival, some family members may choose to work in other occupations, with the remaining members hiring in workers to accomplish the necessary tasks. This shows that at this level, farmers are becoming business oriented. On the other hand, some female respondents expressed that some men are neither engaged in white collar jobs nor other income-generating activities, but that they spend most of their time in bars drinking alcohol. They explained that some of these men actually use the money that the women have made and yet they regard their wives (NAADS beneficiaries) as idlers with time to waste in NAADS activities especially when they go for NAADS related meetings and training. This relates to the statement of Leavy and Poulton (2007) who state that NGO and other critics of the promotion of cash crops have argued that cash crop production absorbs women's labour and may also justify men taking over land previously controlled by women. They further explain that it thereby diverts these resources from food production for household consumption. Meanwhile, the resulting income is controlled by men, who prioritise personal consumption (e.g. of alcohol), marrying other wives or investment in fixed assets, rather than providing for the household's immediate food and nutritional needs (Leavy and Poulton , 2007).

Some women on the other hand participate in NAADS with intentions of finding a means of being self reliant. Most of the women that came up with this reason for their interest in NAADS happened to highlight that they were either widows or separated. After losing or separating from their husbands they had to devise means of being self-reliant.

4.1.2 Age of respondents.

Table 4.1.2: Table Showing the Age Distribution of Respondents

	NAADS facilitators		NAADS beneficiaries			
Age (years)	Frequency	Percentage	Frequency	Percentage	Total	Percentage
19-29	0	0	15	15.2	15	14.6
29-39	1	25	15	15.2	16	15.5
39-49	2	50	32	32.2	34	33
49-59	1	25	22	22.2	23	22.3
69+	0	0	15	15.2	15	14.6
Total	**4**	**100**	**99**	**100**	**103**	**100**

Source: *Primary data*

The table shows that the majority of the general respondents (33%) were aged between 39-49 years. Most of the people in this age group have a lot of responsibility, that is, to themselves and to their dependants. A similar explanation applies for the second biggest number which is of the age group 49-59 (22.3%). There were few respondents in the age group 19-29 (14.6%) because they are more interested in the white collar jobs, some of the people around this age were still attending to school and are still dependants. As noted earlier, the youths are target beneficiaries of the NAADS programme whose participation is ought to be high but the findings contradict this. The few youths who were interviewed explained that youths want to engage in an income-generating activity with short-term gains yet the NAADS programme and its associated gains are long term. The youths usually opt or other income earning ventures such as; cyclists for hire commonly known as boda-boda business, some are involved in brick laying on top of the NAADS enterprises, pottering on buildings in Mbarara town and elsewhere among others. One of the youth respondents said:

> "*…personally, I'm interested in farming but I've not really earned any money from NAADS programmes. It seems to me that agriculture requires patience and yet we have to survive. If you are interested in quick money then you have to think big. On top of farming, I do bodaboda business after checking on the goats and taking them to the field every morning. I leave my cousin in charge after that as I earn money from my bodaboda business.*

Some expressed that some of their friends are not involved due to lack land to practice farming and capital which are required by NAADS enterprises. It was also mentioned that most youths especially the educated ones are doing professional work such as teaching or are engaged in other activities elsewhere and are therefore not interested in NAADS activities.

There were also very few people practicing farming above the year of 69 (14.6%). There are generally fewer people who manage to make it to this age given the life expectancy of Ugandans. The few that manage to make it to this age are usually retired from other active work and would rather turn their interest to farming. Other people above 69 prefer to settle in the country side and outside town, as a result there were less people in this age bracket in Kamukuzi division. There were no respondents below 19 years old because most of them are dependants or still attending school.

4.1.3 Level of Education of respondents

Table 4.1.3: The level of education of the respondents

Level of education	Frequency	Percentage
Below primary level	3	2.9
Primary level	48	46.6
O and A levels	31	30.1
Certificate and diploma	10	9.7
Degree	8	7.8
Post graduate	3	2.9
Total	**103**	**100**

Source: *primary data*

As table 4.1.3 shows, the majority of the respondents (46.6%) had attained only primary school education and depend on agriculture as their main source of income. Most of the respondents were unable to go on after primary level. The low level of education limits the beneficiaries' growth in the level income. Most of these people have limited knowledge on saving and investment. They might be unable to re-invest the money they earn from their farming enterprises or they might spend the money in non income generating activities such as alcohol and purchasing of luxurious stuff.

Table 4.1.3 shows that 30.1% of the respondents had completed O and A levels of secondary level education. Most of the people within this level of education are also engaged in agriculture as their main source of livelihood. The people within this level of education were more assertive and expressed a high level of issues in relation to NAADS. They embrace the NAADS programme as an opportunity that they are hoping to fully exploit. They are interested in re-investing and seeing their agricultural ventures grow. The respondents at the

certificate and diploma level (9.7%), the degree level (7.8%), and the post graduate level (2.9%) were as assertive and interested as those at the O and A level. However unlike the O and A levels that mostly depend on agriculture as their only source of income, the diploma and certificate levels, degree levels and post graduate level respondents mainly practiced agriculture as a source of additional income. Some of the people at the degree, diploma and post graduate level are the NAADS facilitators. They had deep knowledge both theoretical and practical about what goes on within the NAADS programme. The smallest number of respondents (2.9%) comprised of those below the primary level of education and also those who had been to university and had degrees.

4.2.0. Commercialization of agriculture and performance of small scale farmers

4.2.1. Introduction of new breeds that are appreciated by the market.

Table 4.2.1: Results showing whether there was introduction of new breeds

	Frequency	**Percentages**
Strongly Agree	4	100%
TOTAL	**4**	**100%**

Source: *primary data*

All the respondents (NAADS facilitators) noted that the beneficiaries are provided with breeds that will be appreciated by the market. They expressed that intension of providing breeds that are appreciated by the market to maintain a steady market for the agricultural products as a way of increasing commercialization. This is in agreement with Kopainsky, Tröger, Derwisch and Ulli-Beer (2012) who state that seed from improved varieties and other agricultural inputs, such as fertilizer and crop protection products, are imperative to the transformation of the agricultural sector from subsistence farming to small-scale commercial agriculture. They further state that trust building in improved seed is crucial for the transformation towards small-scale commercial agriculture, which also involves the development of adequate skills, that is, of new farming practices. This is in line with what

the NAADS beneficiaries expressed which is that their customers appreciate the new breeds. One of the farmers expressed that customers are interested in the beans because they look good. They have a uniform size and they are well shaped so she tends to supply people who offer catering services with these beans. Another of the beneficiaries expressed customers' interest in the breed of chicken given to him by NAADS. He expressed that these customers were interested in the chicken because it gets ready very fast during preparation and doesn't require a lot of energy while eating. Another of the farmers said;

"… I was given an exotic he-goat when I joined NAADS. I already had a number of indigenous she-goats. I cross bred them and now my goats don't just look good, they are also healthy. They are really big and my customers really appreciate them."

However some of the farmers expressed that some people are still are still attached to the local breeds especially in relation animals. Such buyers are usually interested in purchasing the animal to rear them. The farmer further explained such buyers are concerned about how delicate the exotic breeds are. The indigenous breeds are able to survive in harsh conditions, disease, climatic conditions among others.

4.2.2 Breeds with fast maturity rates

Table 4.2.2: Results showing whether the breeds have fast maturity rates

	Frequency	**Percentages**
Strongly Agree	4	100%
TOTAL	**4**	**100%**

Source: *primary data*

All the NAADS facilitators strongly agreed that the farmers were provided with strong breeds that also multiply fast. The NAADS programme encourages cross breeding. The breeds produced can also lead to large scale production. The NAADS facilitators also expressed that the introduced of breeds also have a fast maturity rate. The money invested in agriculture in this case does not become redundant for long before the products are taken to the market for

sell. The kinds of breeds provided to the beneficiaries such as chicken leads to large scale production in that the layers are able to produce lots of eggs in a short period of time compared to the indigenous chicken. One of the farmers expressed that he started off with poultry rearing with 200layers and 100broiler chicken. He expressed that in a year's time, the chicken had increased to 500 layers and 200 broilers. Another of the beneficiaries while trying to express how fast the maturity of these breeds are stated that he started with 10 pigs but they had within one year multiplied to 36 pigs.

4.2.3 Ability of farmers to meet the market needs

Table 4.2.3: Results showing whether farmers are able to meet market needs

	Frequency	**Percentages**
Strongly Agree	3	75%
Agree	1	25%
TOTAL	**4**	**100%**

Source: *primary data*

75% of the NAADS facilitators strongly agreed that the farmers have the ability to meet market needs and 25% of the NAADS facilitators simply agree to it. This can only be seen in the performance of the NAADS beneficiaries. The NAADS beneficiaries have tried to ensure that they meet the market needs. Some of these farmers move their produce to the market place to make it more convenient for the customers to obtain these products. One of the poultry keepers said;

> *"...when a customer chooses a hen they'd like to take, I offer to help them slaughter the hen if it's for immediate consumption. Most of my customers have come back and I'm sure it's because of my offer. They tell me how tiresome it is to have to slaughter a hen yet you can just cook it. I learnt this tactic from colleagues in one of the NAADS meetings."*

Just like the above farmer, there other beneficiaries that have taken interest in meeting market needs as their way of increasing their sale for agricultural products.

4.3.0 Food security and performance of small scale farmers

4.3.1 Farmers' practice of proper food preservation

Table 4.3.1: Results showing whether the farmers practice proper food preservation

	Frequency	**Percentages**
Strongly Agree	4	100%
Total	**4**	**100%**

Source: *primary data*

All the NAADS facilitators strongly agreed that all the NAADS beneficiaries in Kamukuzi division have proper food preservation. This shows that the NAADS guidelines are being followed. The first thing the NAADS guidelines try to meet is that the farmer has food security. According to the NAADS implementation guidelines (2010) house hold food security is considered the foundation on which agricultural commercialization would be built. The NAADS implementation guide lines define a food security farmer to be 18 years and above, a practicing subsistence farmer with access to land or production unit. It further explains that individual farmers would be selected through their farmer groups in the Village Farmer Forum to receive food security technology inputs for multiplication for access by other farmers and for their own use. These inputs are repayable 100% of the original kind to their farmer groups to enable other members to benefit as revolving resource. This means that every NAADS beneficiary has to go through this stage of being a food security farmer before growing to another. This relates to what according to Leavy and Poulton (2007), Pandey et al. explain, which is that improvements in household food security can thus facilitate and reinforce the process of commercialization rather than negating this process, as is believed in

some policy circles. [Contrary to these same beliefs] ... a more gradual approach that is based on enhancing food security first before launching a major commercialization program for uplands is likely to be more successful in bringing about the desired change (von Braun and Kennedy 1994). They state that examples abound where commercialization programs that did not give due consideration to food security have performed poorly in the uplands of Vietnam and elsewhere (p77). This is also in agreement with what Chirwa and Matita (2012) state which is that household food security also increases the probability of participation, suggesting that when food markets are unstable, farmers that are not food secure may be constrained in their attempt to commercialize their farming systems. Chirwa and Matita further express that the role of food security in the commercialization of smallholder agriculture is also evident from the results of their research, the coefficient of food security being statistically significant at the 5 percent level. They further explain that this shows that households that revealed that they had 'more than adequate food for household needs' in the 2008/09 season on average are 0.09 points more commercialized than those that were food insecure. This relates to what one farmer during said which was;

> *"...I became NAADS beneficiary in 2011(as a food security farmer).I was given one mature pregnant female pig (sow) by the NAADS programme. I gave six female pigs to six members from my group, and was left with a balance of 4 females and 2 males which I am still rearing.*
>
> *Through piggery farming I have been able to pay school fees for my children and buy food for home."*

The above farmers statement agrees with Leavy and Poulton (2007) who express that indeed, without increasing crop income and improving food security in Sub-Saharan Africa, farmers will not be able to afford to send their children to schools and allocate more time to non-farm activities (Otsuka and Yamano 2006, p.30, emphasis added).

Another of the farmers explained that in their meetings they are taught to preserve food. He explained that they are encouraged to keep on increasing produce so that they are able to sell to get food for consumption. They are encouraged not to eat everything or sell everything but be able to sustain themselves throughout. They are encouraged to keep some animals for reproduction and sell some to help them sustain them as they expand.

4.3.2 Improved ways of farm management

Table 4.3.2: Results showing whether there improved ways of farm management

	Frequency	**Percentages**
Strongly Agree	4	100%
TOTAL	**4**	**100%**

Source: *primary data*

All the service providers strongly agreed to the farmers using improved ways of farm management. This is probably because they feel they are doing their part in ensuring that the farmers learn how to manage their farms. One of the farmers when asked said;

"….during our NAADS meetings, we are trained on farm management. They tell us on construction of houses for our animals, how to keep them clean, vaccination of the animals and how to keep them healthy and disease free. We are even taught how to feed our pigs so that they turn out to be of good quality."

The researcher observed that the pig sties were improved and organised, with the piglets and the pigs separated as in the pictures:

4.4.0 Market access and performance of small scale farmers

4.4.1 Provision of market information to the farmers

Table 4.4.1: Results showing whether the farmers are provided with market information

	Frequency	**Percentages**
Strongly Agree	3	75%
Agree	1	25%
TOTAL	**4**	**100%**

Source: *primary data*

75% of the NAADS facilitators strongly agreed and 25% agreed that there is provision of market information to the NAADS beneficiaries. This is because provision of market information helps in increasing market access of the farmers. This relates to what Leavy and Poulton (2007) explain which is that through the example of Heltberg's study of smallholder farmers in Mozambique which finds "to stimulate commercialization the most important factors appear to be improved access to markets and information, risk reduction, capital

accumulation"(Heltberg, 2001). Leavy and Poulton further explain that market links bring broader benefits to poor people in rural areas, and there is plenty of evidence for this (see Dercon and Hoddinott, 2005, among others). This relates to what one of the farmers explained which is that in the NAADS meetings they are told about the best selling periods. The farmer stated;

"…I used to sell all my beans when they are fresh, during their season. During this time, the beans are cheap since everyone has produce. But then I would have to look for beans myself when they are scarce and more expensive. However, from my NAADS group, I have learnt when to sell my beans and gain a lot from them."

The farmers statement relates with what Chirwa and Matita (2012) expressed which is that poor households often sell early in the season when prices are at their lowest, and buy in the deficit season from markets when prices are highest (Omiti et al., 2009). They note that this may threaten their food security and discourage them from greater commercialization.

4.4.2 Construction of improved road network

Results showing whether there was construction of improved road network

	Frequency	**Percentages**
Strongly Agree	3	75%
Agree	1	25%
TOTAL	**4**	**100%**

Source: *primary data*

75% of the NAADS facilitators strongly agreed that there's been construction of improved road network. The 25% just agree that there has been construction of improved road network. . There is a high degree of agreement that there is improved transport network because there has been increased construction of roads and the farmers have access to a means of transport to the market places. Roads help in connecting the farmers to the market places. This relates

to what Smale, Byerlee, and Jayne state which is that few countries in Sub-Saharan Africa are competitive in global markets for exports, largely because of high transport and logistics costs; for the same reasons, most countries are competitive for import substitution. They further state given both greater productivity and improved infrastructure, the expansion of regional markets could eventually provide the basis for competition in export markets (World Bank, 2009). This also agrees to what Leavy and Poulton (2007) state; "…also highlight infrastructure development as necessary to improve access to new markets, as well as bringing other benefits to improve welfare overall".

CHAPTER FIVE

5.0 SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study on the role of National Agricultural Advisory Services (NAADS) programme on the performance of small scale farmers in Uganda. This chapter presents the summary of the findings that were presented in chapter four, the conclusions and the recommendations drawn by researcher and areas of further research.

5.2. Summary of the findings

The summary of findings is presented in order of the objectives of the study and is based on the results from the research study. The objectives were: To examine the relationship between commercialization of agriculture and the performance of small scale farmers, to assess the relationship between food security and the performance of small scale farmers and to evaluate the relationship between market access and the performance of small scale farmers.

5.2.1 Commercialization of agriculture and performance of small scale farmers

The study revealed that the new breeds of crops and animals are appreciated by both the farmers and the market. The study also revealed that the new breeds and improved seeds are crucial for the transformation of agriculture from subsistence farming to commercialized farming. From the study, the researcher also found out that most of these breeds are strong and have a fast maturity rate. The farmer also found out from the study that the fast maturity of the crops and animals leads to fast growth and expansion of the farms which leads to faster transformation of small scale farmers from subsistence farming to commercial farming. The

study also reveals that the small scale farmers consider meeting market needs as one their key issues on their road to commercialization.

5.2.2 Food security and performance of small scale farmers

It was learnt from the study that there is increased food security among the NAADS beneficiaries. It was also learnt that the increased food security among other things due to the selection and support procedure of NAADS which involves all the farmers going through the level of being a food security farmer on which they are taught how to provide for themselves and their families. The study also revealed that the NAADS beneficiaries learn a lot about food security from the NAADS meetings they attend. It was also learnt that proper farm management also contributes to the food security of the small scale farmers' for example by being able to leave some food for personal consumption and being able to leave enough to keep the farm a going concern.

5.2.3 Market access and performance of small scale farmers

It was learnt from the study that among other things increased market access is due to the market information given to the NAADS beneficiaries by the NAADS facilitators through the service providers or the modal farmers. The study also revealed that giving the small scale farmers market information helps in reducing the rate of risk faced by the farmers. The study also revealed that infrastructure development is necessary to improve access to new markets, as well as bringing other benefits to improve welfare. The study also revealed that with improved agriculture farmers are able to easily access market places and customers can also easily come to purchase animals or crops directly from the farm.

5.3 Conclusions

From the above findings it was concluded that commercialization helps in increasing the level of output of the small scale farmers. The study shows that improved breeds that have fast maturity rates can lead to achievement of commercialization of the agricultural sector. The improved breeds with fast maturity rates help in expansion of the farm so fast leading to increase in the level of output. It was also concluded that commercialization leads to increase in the level of income of small scale farmers. The study shows that to ensure commercialization, the NAADS beneficiaries are taught how to meet market needs. Therefore through commercialization, the small scale farmers are able to earn income from farming leading to an increase in their income levels. Based on the findings, commercialization also helps in improving the welfare of the farmers. from the results, it was noted that the farmers that the farmers are able to have increased income which they rely on to improve their welfare.

From the findings it was also concluded that market access helps increasing the level of output of the farmers. Based on the findings the farmers are able to access markets through improved road network, and access of market information. From this it can be concluded that when these farmers access market for their products, they are compelled to produce more leading to their increase in their levels of output. From the findings it was also concluded that market access can help in increasing the levels of income of the farmers. When the farmers access markets for their products, they are able to earn from these products leading to an increase in their levels of income. From the findings it was also concluded that market access can lead to improvement in the welfare of the small scale farmers. This is because from the findings of the study when the farmers access markets, they levels of output increase and as a

result their levels of income increase. It is from this income that it was concluded that these farmers are able to improve their standards of leaving.

From the findings it was also concluded that food security does not directly increase in the level of income of the small scale farmers but can lead to the increase in their level of income. From the results, it was noted that food security is the base of commercialization. So in order for the farmer to be able to earn from farming they have to start with having food security. From the findings it was also concluded that food security contributes to the improvement in the welfare of the small scale farmers. From the results, it was noted that the small scale farmers are taught how to increase food security through food preservation and proper farm management. This therefore enables the small scale farmers to have the ability to provide basic needs for their families and as a result their welfare is improved. It was also concluded that from food security, the small scale farmers are able to increase their levels of production. With proper farm management and the desire and willingness to keep a farm a going concern, the farm grows and the level of production increases as noted in some of the farmers narrations under the study's results.

5.4 Recommendations

Based on the findings, the researcher recommends that the NAADS implementation guidelines are strictly followed because their implementation would help in the achievement of the NAADS objectives. The fundamental aim of NAADS is to develop a demand driven, client-oriented and farmer-led agricultural service delivery system particularly targeting the poor subsistence farmers but with emphasis on women, youth and Persons With Disabilities (PWD). Basing on the findings, most of these objectives are already being achieved and the rest would be achieved if the NAADS implementation guidelines are strictly followed.

Based on the findings, the researcher also recommends that that the youths are encouraged to join the program especially because the youths are part of the emphasized beneficiaries of the NAADS programme. According to the NAADS Implementation Guidelines (2010), one of the requirements for one to be a NAADS beneficiary is access to land or a production unit. The researcher recommends that it be considered that most youths don't have access to land or production units. The researcher therefore recommends that the youths be leased government land which they should pay for after earning from the farming activities they would be involved in.

The researcher also recommends that NAADS facilitators (The NAADS Coordinators at division and district levels and the ASPs) ensure that all the NAADS beneficiaries have adequate knowledge about the NAADS Implementation Guidelines. This will help them understand why the commercial model farmers and the market oriented farmers receive more resources than the food security farmers and how the market oriented farmers, commercializing model farmers and nucleus farmers are selected so that they reduce the tendency of the farmers associating NAADS with corruption as this may change their attitude towards NAADS and its activities. Informing the farmers about the NAADS Implementation Guidelines makes them aware of their roles, obligations, rights and desired degree of participation as beneficiaries of the programme.

Areas of further research

The study covered a small part of NAADS coverage in Uganda was covered and used to come up with the results and the conclusions. Similar research can therefore be carried out in other parts of the country in case of difference in the findings.

Research can also be carried on road network and performance of small scale farmers.

Further research can also be carried out on the role of NAADS and the economic development of the Uganda.

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APPENDICES

Appendix i: the Questionnaire for NAADS Facilitators

Dear respondent, I am Nkaheebwa Clare a student pursuing a bachelors in Business Administration and Management at Uganda Martyrs University, Nkozi. I kindly request you to fill in the questionnaire below that will be used for the collection of data for my dissertation on the role of National Agricultural Advisory Services (NAADS) programme on the performance of small scale farmers. The information given here is strictly confidential and will only be used for the purpose of my research.

A. Background of the respondent

Indicate where you fall by ticking in the bracket after the right thing about you in this section.

Gender:

1. Male	
2. Female	

Indicate the age group under which you fall:

1. Below-19	
2. 19-29	
3. 29-39	
4. 49-59	
5. 59-69	
6. 69+	

Indicate the level of education that you have accomplished:

1. Below primary level	
2. Primary school level	
3. O & A levels	
4. Certificate & Diploma	
5. Degree	
6. Post graduate	
7. Others (Specify)	

B. Please state your level of agreement or disagreement with the following statements in the following order; 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly agree

NO	**Statement**	1	2	3	4	5
A	The breeds provided by NAADS are appreciated by the market					
B	The breeds provided by NAADS have a high maturity rate					
C	With the help of NAADS farmers can now meet the market needs					
D	NAADS has helped with farmers' proper food preservation					
E	There is improved farm management among beneficiaries					
F	Market information is provided to NAADS beneficiaries					
G	There has been construction improved road network					

C. CLOSE

Thank you very much for your time.

Appendix ii: Interview Guide for Modal Farmers

1. For how long have you been a NAADS beneficiary?
2. What criterion was followed for you to become a NAADS beneficiary?
3. How do you feel you contribute in NAADS?
4. Do you feel that you have benefited from being a NAADS beneficiary?
5. What would you recommend NAADS to do for better performance?