

**PROBLEMS OF IMPROVING AGRICULTURAL TECHNOLOGY IN PEASANTRY
SOCIETIES IN UGANDA**

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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF HUMANITIES AND
SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE BACHELORS DEGREE IN DEVELOPMENT
STUDIES OF KAMPALA INTERNATIONAL
UNIVERSITY**

MARCH, 2015

Declaration

, **Apio Caroline**, hereby declare that the work presented in this research report is based on my own research, except where otherwise acknowledged and has never been submitted to any University or any Institution of higher learning for a Degree or Diploma.

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Approval

This is to certify that this research report has been done under my supervision and submitted to the College of Humanities of Social Sciences of Kampala International University-Kampala, Uganda with my approval for examination.

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Date : 11 - May 2015

Dedication

dedicate this work to my beloved mother; Mrs. Esther Akello Otim, brothers; Okeng Emma, Otim Johnny and sister; Adong Agnes.

Acknowledgement

I thank the Almighty God for making it possible for me to complete this piece of work. Special thanks to Him for the knowledge, wisdom, courage and determination he has granted me.

I am particularly indebted to my supervisor Dr. Otanga Rusoke for his timeless guidance and correction in the conduct of this research report. He really inspired, motivated and assisted me during the process of this work.

I acknowledge the management of peasant societies of Ngetta sub county for your support and to the authors whom I have used their references in coming up with this report. Also to respondents who sacrificed their time in giving me relevant information that backed my research.

Further thanks to my dear mother for her support, care and courage during my study. I am also grateful my dearest friend Aluri Andrew. May God Bless you abundantly.

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List of Acronyms

CAADP	Comprehensive Africa Agriculture Development Program
DSIP	Development Strategy and Investment Plan of Uganda
ERP	Economic Recovery Programme
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GM crops	Genetically Modified crops
IMF	International Monetary Fund
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries of Uganda
NDP	National Development Plan of Uganda
NRM	National Resistance Movement
PEAP	Poverty Eradication Action Plan
PIBID	Presidential Initiative on Banana Industrial Development, Uganda
PMA	Plan for Modernisation of Agriculture
WTO	World Trade Organisation

Abstract

The study was about the problems of improving agricultural technology in peasantry societies in Uganda; a case study of Ngetta sub county, Lira district. The study was based on the following three objectives; to establish modernisation strategies of improving agricultural technology in peasantry societies, to establish the problems affecting modernisation strategy in peasantry societies and to examine the relationship between agriculture modernisation and food production in peasantry societies. A sample of 70 respondents both female and male peasants from the societies of Ngetta sub county, Lira district were used for the study. The study employed a case study research design and methodology used was both qualitative and quantitative. Questionnaires and documentary review were the major tools of data collection. In regard to modernisation strategies of improving agricultural technology in peasantry societies, it was revealed by majority 50.00% of respondents strongly agreed for Plan for Modernisation of Agriculture (PMA), 47.14% agreed for Poverty Eradication Action Plan (PEAP), 61.43% strongly agreed for National Development Plan (NDP), 58.57% of respondents agreed for Development Strategy and Investment Plan (DSIP) and 41.43% of respondents agreed for Presidential Initiative on Banana Industrial Development (PIBID) as agricultural modernisation strategies that have been established by Societies of Ngetta Sub County to improve agricultural technology. In regard to challenges to modernisation strategies, it was revealed by majority 67.14% strongly agreed that agricultural modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems, majority 44.29% agreed that agricultural modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners and majority 70.00% strongly agreed that agricultural modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture. In regard to relationship between agriculture modernisation and food production in peasantry societies, majority 51.43% strongly agreed that agricultural modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies, majority 52.86% strongly agreed that agricultural modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples. The researcher recommended that agricultural modernisation strategies should: aim at orienting subsistence farmers towards the market; transform subsistence farming to commercial agriculture; not consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the background of study, problem statement, purpose of the study, research objectives, and research questions, scope of the study, significance of the study and the conceptual framework of the study.

1.1 Background of the Study

The extent to which ‘small farmers’ can satisfy their food needs from their own production is shaped by the ways they are integrated in commodity relations. (Henry Bernstein, 2010). The 1980s marked a turning point for agricultural policy in most developing countries; the conventional state-run agricultural policies were undergoing structural transformations and experiencing serious reversals (Chang, 2009). The start of the Structural Adjustment Programs in Uganda, funded by the IMF (International Monetary Fund) and the World Bank, saw to it the end of state support and/or subsidisation of inputs, such as credits, extension services, fertilisers and seeds. Existing programmes were deemed to be inefficiently implemented and increasing pressure on state finances, coupled with the uncontrolled corruption and embezzlement, exercised (Ibid.).

As a follow-up to the 1980’s adjustment programmes, the National Resistance Movement (NRM) needed strong target reform programmes in sectors that were essential to the survival of Uganda as a state, and in 1987, the World Bank/IMF SAP was signed establishing a government overall platform of national unity and broad-based economic reform (Belshaw et al., 1999). With low production numbers, horrid transport, education, administration and medical systems, and a decaying economic and social structure perforated by corruption high inflation and limited foreign exchange, black markets and low quality labour force as the skilled had migrated, the adjustment had to be quick and fast and with high turnout (Baffoe, 2000). The focus on agriculture as the main sector held high ground with highest GDP contribution, highest employing sector and food supply, Therefore it was right to suggest that transforming Uganda’s agricultural sector was/is a vital option in the reform and development of the entire economy (Mukiibi, 2001).

One of the key strategies for Uganda’s economic growth was the modernisation of the agricultural sector and the agro-industry. This was done through liberalising agriculture markets, reducing trade barriers and promoting traditional and non-traditional exports (Nyangabyaki,

2001). For the majority part, modernisation of agriculture is based on the assumption that subsistence agriculture, practised by the majority of peasants, is an obstacle to change and progress of the national economy. Subsistence agriculture is mainly characterised by production for home consumption and minimal surplus to meet social and cash obligations (MAAIF, 2010). It was argued that, due to its inefficiency, subsistence agriculture should be actively removed (Ploeg, 2008). At the macroeconomic policy level, a policy framework was established to create an enabling environment for farmers, entrepreneurs and investors to make informed and value-enhancing decisions. These policies are expected to promote private sector investment and raise farmer productivity, which implies that theoretically and practically peasants have to be replaced by the entrepreneurial farmer.

Aiming at increased productivity as the policy outcome, the agricultural sector would change dramatically in line with the core setup of diversifying to mainly non-traditional agricultural exports, thus strengthening the competitiveness and price-fetching capabilities on the world market. However, there is caution that as much as trade liberalisation can be a driver for growth and development, there is a flipside where opening up markets to international trade may destroy the local industry and agriculture sector with high competition for the cheap, tariff free, home-subsidised foreign products.

1.2 Problem Statement

Constituting the largest part of Uganda's population, rural households are a highly important group of society. At the same time, peasants are particularly vulnerable and specifically affected by contemporary development approaches aiming at "modernising" agriculture through market-led development. In Uganda, increased market production, the use of improved seeds and soil enriching fertilisers, are regarded as the central elements for agriculture modernisation in peasant societies, especially in rural areas. After more than two decades of agriculture modernisation and export and trade for development policies, there is not much to show for in the fulfilment of the development expectations (IFAD, 2011).

With 73% of Uganda's population depending on agriculture for food and income, it seems logical to focus on the modernising agricultural sector in the attempt to address food and income insufficiencies (MAAIF, 2010). However, there is a danger that current transformations will create a landless peasant class, and that unsustainable structures will inadvertently impact not only on rural livelihoods, but also on economic growth and development more generally.

1.3 Purpose of the Study

The objective of this study is to understand the contributions and limitations of transforming peasant farming to entrepreneurial agriculture, as manifested in the modernisation strategy. The paper thereby seeks to identify key issues that should be addressed if agriculture transformation is to fulfil its targets of increased food availability and reduction of rural poverty, and will suggest further detailed research on particular issues.

1.4 Research Objectives

- (i) To establish modernisation strategies of improving agricultural technology in peasantry societies
- (ii) To establish the problems affecting modernisation strategy in peasantry societies
- (iii)To examine the relationship between agriculture modernisation and food production in peasantry societies

1.5 Research Questions

- (i) What are the modernisation strategies of improving agricultural technology in peasantry societies?
- (ii) What are the problems that affect modernisation strategy in peasantry societies?
- (iii)What is the relationship between agriculture modernisation and food production in peasantry societies?

1.6 Scope of the Study

1.6.1 Geographical Scope

The proposed study was conducted at Ngetta sub county located lira district northern Uganda. Ngetta sub-county is one of the eight sub-counties in Erute County. It is 66 square kilometres in size of which 15 square kilometres is wetland.

1.6.2 Content Scope

The study focused on the problems affecting agricultural modernisation in Ngetta Sub County, and the recommendations for solving such problems.

1.6.3 Time Scope

The study was carried out between February to March 2015 and it will consider the problems of modernising agricultural technology faced by peasantry societies of Ngetta Sub County in 2010-2014.

1.7 Significance of the Study

The study findings will be used by future investors both local and international who hope to invest in agriculture to come with enough information on how to improve productivity, revenue and poverty reduction.

The study findings will also help policy makers in different agricultural sectors to come up with informed decisions in terms of their performance as they will be able to understand the links that exist between the variables and therefore helping them to make effective judgmental decisions in relation to the study findings.

The study findings will be used by government agencies like the Uganda Revenue Authority (URA), the Ministry of Trade and National Agricultural Advisory Services (NAADS) to evaluate the impact of modernised agricultural sector on the productivity of peasantry societies.

The study findings will be used as a reference for future researchers in their study or related studies having contributed to operational definition of concepts, literature and methodology for such future studies.

The study findings are also a requirement for the award of a bachelor's degree to the researcher.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Under this chapter the researcher analyzes and gives critical views on issues that have been put forward by different scholars and academicians. Different subjects will be reviewed under different headings.

2.1 The Peasant Condition

The study adopts the argument that the peasantry is not a hindrance to development; it is a stepping stone that the government could have utilised (Ploeg, Jan Douwe van der, 2008). It presents an obstacle only to the development of large-scale capitalist agriculture. In the pursuit of power and commercial gain, peasants are taken as “non-people” – those whose lives are regarded as worthless and expendable. They can be equated with the modern day ‘savages’ as expressed in the colonial times. Those who set conditions and circumstances aiming to remove the ‘unpeopled’ are hailed as the upholders of civilisation, bringing modernisation (Curtis, 2004). It is clear to see why the current political economy of agriculture takes the peasants as an inferior, backward group in the attempts to ‘modernise’ agriculture.

The mainstream argument has for a long time been that the peasantry is a hindrance to development and their involvement and dependence on agriculture was taken as a given (Ellis, 1988; Byres, 1986). In terms of agricultural production, the peasant farming system is characterised by employing family labour which determines the farm size. However, the farm size varies among the different kinds of farming; animal rearing, type of crops (Bernstein, 2010). The conditions that prevail in the national and global society are integrated within the peasant production system through the dominant exchange systems and in that sense influence the way of life. Therefore, the peasantry represents a way of life which transforms into a system of production and distribution that in turn supports this way of life, meaning that the peasant condition defines and specifies the mode of production as they produce and reproduce one another.

2.2 Modernisation and Agriculture Expectations

Experiences after twenty-seven years show the same failing patterns in the government’s efforts to fulfil the agricultural reform expectations of growth in export and agro-markets. Uganda’s agriculture reform towards trade started long ago between 1890 and 1926, with the British colonial system introducing plantation farming with the purpose of exportation (Jørgensen, 1981;

Nyangabyaki, 2000). In the post-independence period, Ugandan exports were still dominated by the traditional agricultural products – coffee, cotton, tea and tobacco. The expansion of agricultural production for trade was the dominant theme in the government's efforts to fight poverty and attain rural development. This was made clearer when Uganda became a founding member of the WTO after the ratification of the Marrakesh Agreement in September 1994. Before, Uganda had been a GATT (General Agreement on Tariffs and Trade) contracting party since independence in 1962 (WTO, 1995).

With the gross economic mismanagement and strife during the Amin era of 1971 to 1979, by the mid-1980s Uganda had crumbled to one of the poorest countries in the world (Loxley, 1989). In 1987, the new NRM government had set in motion an Economic Recovery Programme (ERP), which was a version of the orthodox IMF and World Bank-led Structural Adjustment Programme. The key processes of the ERP were: decentralisation of the government and promoting market liberalisation; privatisation, de-regulation, and legal frameworks to facilitate international trade (DENIVA, 2005). For the agriculture sector, the current trade policies are set up to promote diversification of agriculture exports towards non-traditional crops and liberalisation of input and product markets (DENIVA, 2005). Clearly, this trajectory of alleviating poverty and improving the standards of living through trade and agriculture can be traced back to 1987, when Uganda embarked upon its Economic Recovery Program (Aleem and Kasekende, 1999).

2.3 Modernisation Strategies for Improving Agricultural Technology in Uganda

In 2000, the Plan for Modernisation of Agriculture (PMA) aimed at orienting subsistence farmers towards the market (MAAIF, 2000) was formed. The PMA became the linchpin government strategy which initially was the agreed framework for the Poverty Eradication Action Plan (PEAP) that was launched in 1996, but operationalised later in 1997 (World Bank, 2010). The National Development Plan (NDP) is the succession policy of the last PEAP, which expired in June 2010. The NDP expands on the visions and strategies of the PEAP developed in 2008/09 and launched in April 2010, and draws on in-depth household surveys taken between 1992 and 1993 (IMF, 2010).

The PMA worked up to 2009, and a new and revised agriculture development policy was developed. In 2010, the new agriculture Development Strategy and Investment Plan, (DSIP), was launched. The DSIP is the operational plan for the agriculture sector within the national development plan with the objective to increase incomes, reduce poverty and achieve food and nutrition security. The government looks to the DSIP as the main framework to achieve the

development objective mentioned above, through “development of the private sector, supported by market-led development, regional integration, continued maintenance of macroeconomic stability and a favourable policy, fiscal and regulatory environment” (CAADP, 2010).

Mapping out the policy trails for agriculture policy is to highlight the fact that the National Resistance Movement government has for a long time put into operation succession reforms aimed at “transforming” agriculture to build an export-led economy. The 2000-09 PMA, which was a continuation of the economic recovery programmes of the late 1980s, had a mission to eradicate poverty and improve the well-being of poor subsistence farmers by “transforming subsistence agriculture to commercial agriculture” (MAAIF, 2000). The DSIP follows suit with a similar mission to “transform subsistence farming to commercial agriculture” (MAAIF, 2010). The expectations that the new and revised policy is better suited to address poverty and hunger problems in Uganda is a big doubt, because little has changed in terms of strategy. The only change is the diminished emphasis of smallholders in the agriculture transformation process in favour of the market and related systems. Chapter 2 of the PMA was focused on understanding the poor farmers from different perspectives. Its main target ‘beneficiaries’ were the subsistence farmers as much as it recognised that all other category farmers (semi-commercial farmers and commercial farmers) will benefit from this transformation (PMA, 2010).

The market-led DSIP arguably represents the orthodox perspective of economic growth and development which considers peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture. The DSIP focuses on four broad and mutually reinforcing investment programmes, detailed in Appendix E.

The DSIP offers a broad framework for agriculture development that is streamlined across all activities relating to agriculture and rural development.

Another important project within the DSIP that instantaneously links with the market and value-addition is that of ‘enhancing agricultural production and productivity’. Investments in agriculture from early 2000 under the PMA have been geared towards agriculture commercialisation, and this has continued with the DSIP advocating for industrial agriculture inputs. The markets and value addition programme has set objectives that look to; (a) improved capacity for regulation and enforcement especially in safety standards and quality assurance across crops, livestock and fisheries, (b) farmers have improved access to high quality inputs, planting and stocking materials, (c) increased participation of the private sector in value addition activities and investment, (d) expanded network of rural market infrastructure including

appropriate structures to improve post-harvest losses and (e) the capacity of existing farmers' organisations built up in management, entrepreneurship, and group dynamics so they can engage in value-chain activities especially collective marketing. (MAAIF, 2010)

2.4 Challenges to Modernisation Strategies

The DSIP takes a rather drastic change on emphasis. The agriculture situation analysis (MAAIF, 2010) fails to mention the importance of smallholders, yet this policy is meant to address their food and hunger problems. It highlights its immediate objectives such as improving factor productivity (land, labour and capital), developing markets for primary and secondary agricultural products and favourable legal, policy and institutional frameworks to facilitate private sector expansion and increase profitability in the value chains. It ends with institutional development of the relevant ministries and agencies functioning as modern, client-oriented organisations (MAAIF, 2010). The challenge, however, is that the vulnerability of the smallholder with the increased dependency on the market is downplayed. It is suggested that rural households are shielded from global market price shocks, since the majority are self-sufficient; consuming their own staples (MAAIF, 2010). Yet, this argument can be critiqued, because with the limited food production of the rural households, it is difficult for them to avoid the market. In this context, it becomes evident that the peasants would be doomed to a bitter fate if they became fully immersed in the global market, as intended in the modernisation strategy.

Under the Presidential Initiative on Banana Industrial Development (PIBID) which is part of the government's agriculture modernisation programme, PIBID's main goal is to add value to bananas by transforming banana into secondary products like banana flour sold on the world market as a substitute of wheat. The processed, labelled and packaged bananas are directed at international markets and partially at local and regional markets (PIBID, 2011). This is the transformation of a local staple food crop into a cash crop this trajectory of rural transformation highlights the disconnectedness of the government's ideals and interventions to the on-ground reality where smallholder farmers' livelihoods are to lose their food source on the promise of more profit income if they produce directly for the processing enterprises that represent the government's interests of turning the agriculture sector into a revenue generating sector.

The DSIP bundles the peasants within the sector stakeholders, their needs and values being taken is similar to those of the private investors and development partners like the United States Agency for International Development (USAID), the World Bank, the IMF and non-governmental organisations. There is no direct programme or emphasis within the DSIP on how to support the peasantry; the concerns of the peasantry are left at the mercy of the private sector-

ed and market-oriented agriculture system. Yet, with 80% of the population employed in the agriculture sector, as noted above, the importance of considering the peasantry as priority becomes obvious. Putting emphasis on the market system would imply reorganising agricultural production processes by changing the dominant agricultural system: Peasant/smallholder farming would be replaced with an entrepreneurial mode of farming that is compatible with capitalist market systems of production and exchange (Ploeg, 2008).

Rather than promoting self-sufficiency and autonomy, the DSIP suggests the reverse; it focuses on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security. Furthermore, in its conceptualisation of poverty and agriculture modernisation, the DSIP makes the rather unfounded proposition that “agriculture’s ability to generate income for the poor, particularly women, is more important for food security than its ability to increase local food supplies” (Ibid.).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the procedures that were followed in conducting the study. These include, research design, population of the study area, sample size and selection, data collection instruments, as well as the techniques that will be used to analyze data, validity & reliability of the study and ethical consideration.

3.1 Research Design

The study used study research design and both primary and secondary researches were utilized. The design was selected because it was highly effective in bringing out results on problems of improving agricultural technology in peasantry societies in Ngetta Sub County, Lira district.

3.2 Population of the Study

The population of the study involved a total of 85 people, both female and male from peasants societies of Ngetta Sub County, Lira district.

3.3 Sample Size

The researcher used Slovene's formula in determining the minimum sample size. According to this formula, the sample size was obtained using $n = \frac{N}{1+Ne^2}$

Where, N is the target population, n is the sample size and e is the level of statistical significance and in this study was 0.05.

$$\begin{aligned}n &= \frac{N}{1 + Ne^2} \\n &= \frac{85}{1 + 85(0.05)^2} \\n &= \frac{85}{1.175} \\n &= 70\end{aligned}$$

Therefore, 70 respondents were selected for the study.

3.4 Sample Selection

The study used the random sampling which involved selecting respondents from the study population by chance. The random sampling technique was used to select the sample for this

investigation. Harris (1995) is of the opinion that a random sample is a sample that is chosen in such a way that every possible sample with the same number of observations is equally likely to be chosen. Sample units were randomly selected from clusters among which the population was divided. The sampling units within these randomly selected clusters were then selected to provide a representative sample from the population. This sampling technique is commonly used where the population under investigation is spread over a large geographical area. Smaller regional clusters were then easily sampled (Harris 1995).

3.5 Data Collection Methods

The study obtained primary data by the use of self administered questionnaires while review of related literature were used to collect secondary data (especially from the documents kept by peasant societies of Ngetta Sub County as well as from the written literature by different authors. Secondary methods helped to guarantee the authenticity of the data collected at the end. To collect primary data, questionnaire surveys were used: they are valuable method of collecting a wide range of information from a large number of respondents and they are usually straightforward to analyze (Saunders et al 2009). The self administered questionnaires approach was preferred because it is an appropriate instrument for any survey research. Adequate questionnaire construction is critical to the success of a survey. Inappropriate questions, incorrect order of questions, incorrect scaling, or poor questionnaire format can make the survey valueless, as it may not accurately reflect the views and opinions of the participants, (Mugenda and Mugenda 1999).

3.6 Data Analysis

The data was captured using the computer programme Microsoft Excel – version 5. The captured data was then analyzed by using the appropriate statistical tests. The statistical analysis was achieved by using the computer programme, Statistical Package for Social Scientists - SPSS version 17. The results obtained from the statistical analysis of the data were presented in various tables.

3.7 Validity and Reliability of the Study

The validity of the results obtained from a sample focused on the extent to which they satisfy their ultimate purpose. The content validity was ensured by submitting the research designed questionnaire to an expert in my field to judge whether the instrument is valid or invalid. The data obtained from the respondents were doubly checked to ensure its accuracy and was processed for analysis. The data was edited, coded for completeness and processed using the Statistical Package for Social Scientists (SPSS) version 17 for the purpose of summarizing it.

3.8 Ethical Consideration

A study certificate from the school signed by the Dean was attached to the questionnaire introducing the author as a bachelor's student of Kampala International University of College of Humanities and Social Sciences. A cover agreement between the researcher and the LCIII will be attached to assure the respondents of anonymity of the data they had to provide.

3.9 Limitations of the Study

There are various limitations to this study that threaten the research validity. To address this issue the researcher will claim an allowance of 5% margin of error at 0.05 level of significance. Measures are also indicated in order to minimize, if not to eradicate the threats to validity of the research findings of the study.

There will be attrition/mortality in that not all questionnaires may be returned completely answered yet some may even fail to be retrieved back due to circumstances on the part of the respondents such as travels, sickness, hospitalization and refusal/withdrawal to participate. In this case, the researcher will receive more respondents by exceeding the minimum sample size. The respondents will also be reminded not to leave any item in the questionnaires unanswered and will be closely followed up as to the date of retrieval.

The research instruments on the study are not standardized. Therefore there will be validity and reliability test done to produce a credible measurement of the research variables of the study.

During the administration of the questionnaires, the research assistant can bring about inconsistency in terms of time of administration, understanding of the items in the questionnaires and explanations given to the respondents. Therefore to minimize this threat, the research assistant will be oriented and briefed on procedures to be done in data collection.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF FINDINGS

4.0 Introduction

Under this chapter the researcher presented, interpreted and analyzed the findings. The researcher followed the objectives of the study to help in making a thorough analysis. The researcher used tables to present and analyze the findings.

4.1 Biographical Data of Respondents

The biographical data of both female and male peasants of Societies of Ngetta Sub County, Lira district were considered to be significant in terms of evaluating problems of improving agricultural technology in peasantry societies in Societies of Ngetta Sub County, Lira District. The biographical data consisted of age, gender, educational level, marital status, working experience and position.

4.1.1 Age Groups of Respondents

Table 4.1: Age Groups of respondents

Age	Frequency	Percent
Under 20	9	12.86
21 – 30	21	30.00
31 – 40	21	30.00
41 – 50	13	18.57
51 – 60	5	7.14
61 and Above	1	1.43
Total	70	100.00

Source: Primary Data, 2015

During the field study, it was found out that the biggest percentage of respondents were in age bracket of 31-40 years as shown by 30.00%. 30.00% of the respondents were in age bracket of 21-30 years, 18.57% were of 41-50 years, 12.86% were of less than 20 years, 7.14 % were of 51-60 years and 1.43% was of 61 and above years. This implies that respondents in age bracket of 31-40 & 21-30 years actively participated in the study.

4.1.2 Gender of Respondents

Table 4.2: Gender of Respondents

Gender	Frequency	Percent
Male	60	85.71
Female	10	14.29
Total	70	100.00

Source: Primary Data, 2015

During the field study, it was found out that the biggest percentage of respondents were males as shown by 85.71% whereas 14.29% of respondents were females, implying that males were the ones who actively participated in the study.

4.1.3 Level of Education of Respondents

Table 4.3: Level of Education of Respondents

Level of Education	Frequency	Percent
Below Certificate	2	2.86
Certificate	29	41.43
Diploma	32	45.71
Degree	4	5.71
Post-Graduate	2	2.86
Total	70	100.00

Source: Primary Data, 2015

The biggest percentage of respondents were diploma holders as it was revealed by 45.71% of the respondents. This was followed by 41.43% of respondents who were certificate holders, then 5.71% of the respondents were degree holders, 2.86% of respondents were below certificate holders and 2.86% of respondents were post-graduate holders.

4.2 Modernisation Strategies for Improving Agricultural Technology in Societies of Ngetta Sub County

The study objective one was set to determine the modernisation strategies for improving agricultural technology in societies of Ngetta Sub County.

Table 4.4: Modernisation Strategies for Improving Agricultural Technology in Societies of Ngetta Sub County

The following are the modernisation strategies that have been established by Societies of Ngetta Sub County to improve agricultural technology

Modernisation Strategies	Category	SD	D	NS	A	SA	Total
Plan for Modernisation of Agriculture (PMA)	Peasants	0	0	6	29	35	70
	Total %	0.00	0.00	8.57	41.43	50.00	100.00
Poverty Eradication Action Plan (PEAP)	Peasants	0	0	5	33	32	70
	Total %	0.00	0.00	7.14	47.14	45.71	100.00
National Development Plan (NDP)	Peasants	0	0	4	23	43	70
	Total %	0.00	0.00	5.71	32.86	61.43	100.00
Development Strategy and Investment Plan, (DSIP)	Peasants	0	0	6	41	23	70
	Total %	0.00	0.00	8.57	58.57	32.86	100.00
Presidential Initiative on Banana Industrial Development (PIBID)	Peasants	5	6	15	29	15	70
	Total %	7.14	8.57	21.43	41.43	21.43	100.00

Source: Primary Data, 2015

From table 4.4, it was found out that the majority of the respondents, that is, 50.00% in this study strongly agreed that Plan for Modernisation of Agriculture (PMA) is a strategy for agricultural modernization in Societies of Ngetta Sub County. 41.43% of respondents agreed with this view and 8.57% of respondents were not sure whereas 0% number of respondents neither disagreed nor strongly disagreed, implying that Plan for Modernisation of Agriculture (PMA) is a strategy for agricultural modernization in Societies of Ngetta Sub County. The findings illustrated in table

4.4 indicate that the majority of the respondents, that is, 47.14% agreed that Poverty Eradication Action Plan (PEAP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. 45.71% of the respondents strongly agreed while 7.14% of respondents were not sure and none of respondents strongly disagreed. From table 4.4, the majority of the respondents, that is, 61.43% in this study strongly agreed that National Development Plan (NDP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. This was followed by 32.86% of respondents who agreed, 5.71% were not sure and none of respondents strongly disagreed or disagreed, implying that National Development Plan (NDP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. According to table 4.4, 58.57% of respondents agreed that Development Strategy and Investment Plan, (DSIP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. While 32.86% of respondents strongly agreed and 8.57%, 0% and 0% number of respondents were not sure, disagreeing and strongly disagreeing with this opinion respectively, implying that Development Strategy and Investment Plan, (DSIP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. As can be seen in table 4.4, 41.43% of respondents agreed that Presidential Initiative on Banana Industrial Development (PIBID) is an agricultural modernisation strategy that has been established by Societies of Ngetta Sub County to improve agricultural technology. 21.43% of respondents strongly agreed and the same percentage were for respondents who were not sure. 8.57% and 7.14% of respondents disagreed and strongly disagreed with this statement respectively. This implies that Presidential Initiative on Banana Industrial Development (PIBID) is an agricultural modernisation strategy that has been established by Societies of Ngetta Sub County to improve agricultural technology.

Table 4.5: Modernisation strategies are applied to the following food crops

Food crops	Category	SD	D	NS	A	SA	Total
Rice	Peasants	0	2	8	30	30	70
	Total %	0.00	2.86	11.43	42.86	42.86	100.00
Maize	Peasants	0	2	10	25	32	70
	Total %	0.00	2.86	14.29	35.71	45.71	100.00
Millet	Peasants	0	2	9	36	23	70

	Total %	0.00	2.86	12.86	51.43	32.86	100.00
Cassava	Peasants	0	1	6	21	41	70
	Total %	0.00	1.43	8.57	30.00	58.57	100.00
Potatoes	Peasants	2	6	9	39	15	70
	Total %	2.86	8.57	12.86	55.71	21.43	100.00
Sweet potatoes	Peasants	2	7	14	30	17	70
	Total %	2.86	10.00	20.00	42.86	24.29	100.00
Groundnuts	Peasants	3	4	13	41	10	70
	Total %	4.29	5.71	18.57	58.57	14.29	100.00
Bananas	Peasants	2	4	15	39	11	70
	Total %	2.86	5.71	21.43	55.71	15.71	100.00

Source: Primary Data, 2015

From table 4.5, it can be seen that 43.86% both agreed and strongly agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to rice production. 11.43% of respondents were not sure, 2.86% disagreed and none of respondents strongly agreed. The results displayed in table 4.5 indicate that the majority of the respondents, that is, 35.71% and 45.71%, in this study, respectively agreed or strongly agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Maize production. 14.29% were not sure and 2.86% agreed with this whereas 0% strongly agreed, implying that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Maize production. According to table 4.5, 51.43% and 32.86% of the respondents in this study respectively agreed and strongly agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Millet production. 12.86% of respondents were not sure and 2.86% agreed. None of respondents strongly agreed. This implies that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Millet production. Table 4.5 indicate that 58.57% of respondents strongly agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Cassava production while 30.00% of respondents agreed. 8.57% of respondents were not sure and 1.43% agreed with this. None of respondents strongly agreed. This implies that peasants in Societies of Ngetta Sub County apply agricultural

modernization strategies to Cassava production. As illustrated in table 4.5, 55.71% of respondents agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Potatoes production. This was so high as compared to 21.43%, 12.86%, 8.57% and 2.86% of respondents who strongly agreed, not sure, disagreed and strongly disagreed with this respectively. This implies that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Potatoes production. From table 4.5, it can be seen that 42.86% of respondents agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Sweet potatoes production. 24.29% of respondents strongly agreed while 20.00% of respondents were not sure, 10.00% disagreed and 2.86% of respondents strongly disagreed with this view implying that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Sweet potatoes production. From Table 4.5, majority of respondents indicated by 58.57% agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Groundnuts production. This was compared with 14.29% of respondents who strongly agreed, 18.57% were not sure, 5.71% disagreed and 4.29 strongly disagreed with this view. This implies that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Groundnuts production.

In table 4.5, 55.71% of respondents agreed that peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Bananas production. 21.43% of respondents were not sure while 15.71% of respondents strongly agreed. Only 5.71% and 2.86% of respondents disagreed and strongly disagreed with this view respectively. Thus, peasants in Societies of Ngetta Sub County apply agricultural modernization strategies to Bananas production.

4.3 Challenges to Modernisation Strategies

Table 4.6: Modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems.

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	8	11.43
Not Sure	2	2.86
Agree	13	18.57
Strongly Agree	47	67.14
Total	70	100.00

Source: Primary Data, 2015

As can be observed from table 4.6, 67.14% of respondents strongly agreed that agricultural modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems. 11.43% of respondents disagreed while 2.86% of respondents were not sure and none strongly disagreed. This implies that agricultural modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems.

Table 4.7: Modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners

Response	Frequency	Percent
Strongly Disagree	4	5.71
Disagree	11	15.71
Not Sure	6	8.57
Agree	31	44.29
Strongly Agree	19	27.14
Total	70	100.00

Source: Primary Data, 2015

From table 4.7, it was found out that 44.29% of respondents agreed that agricultural modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners. Whereas 27.14% of respondents strongly agreed, 15.71% disagreed with this view. 8.57% were not sure and only 5.71% of respondents strongly disagreed. Thus, agricultural modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners.

Table 4.8: Modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.

Response	Frequency	Percent
Strongly Disagree	1	1.43
Disagree	2	2.86
Not Sure	0	0.00
Agree	18	25.71
Strongly Agree	49	70.00
Total	70	100.00

Source: Primary Data, 2015

From table 4.8, 70.00% of respondents strongly agreed that agricultural modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.. 25.71% of respondents agreed, 2.86% disagreed, 1.43% strongly disagreed and 0% was not sure with such view which implies that agricultural modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.

Table 4.9: The PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security.

Response	Frequency	Percent
Strongly Disagree	0	0.57
Disagree	4	5.11
Not Sure	0	0.57
Agree	33	46.59
Strongly Agree	33	47.16
Total	70	100.00

Source: Primary Data, 2015

From table 4.9, it is clear that 47.16% and 46.59% of respondents respectively strongly agreed and agreed that the PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security. Only 5.11% of respondents disagreed. This

implies the PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security.

Table 4.10: Smallholder farmers' livelihoods lose their food source on the promise of more profit income due to modernisation strategies

Response	Frequency	Percent
Strongly Disagree	4	5.11
Disagree	29	42.05
Not Sure	1	1.14
Agree	14	19.32
Strongly Agree	23	32.39
Total	70	100.00

Source: Primary Data, 2015

From table 4.10, 32.39% of respondents strongly agreed smallholder farmers' livelihoods lose their food source on the promise of more profit income due to agricultural modernisation strategies. Only 19.32% of respondents agreed. However, 42.05% disagreed with this issue, implying that smallholder farmers' livelihoods do not lose their food source on the promise of more profit income due to agricultural modernisation strategies.

4.4 Relationship between Agriculture Modernisation and Food Production in Peasantry Societies.

Table 4.11: Modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	9	12.86
Not Sure	0	0.00
Agree	24	34.29
Strongly Agree	36	51.43
Total	70	100.00

Source: Primary Data, 2015

From Table 4.11, it can be observed that 51.43% of respondents strongly agreed that agricultural modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies. Also this was complimented by 34.29% of respondents who agreed with this view. Only 12.86% of respondents disagreed, implying that agricultural modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies.

Table 4.12: Modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security.

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	16	22.86
Not Sure	1	1.43
Agree	22	31.43
Strongly Agree	31	44.29
Total	70	100.00

Source: Primary Data, 2015

In table 4.12, it is clear that 44.29% of respondents strongly agreed that agricultural modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security.. Also 31.43% agreed with this view though 22.86% of respondents disagreed. This implies that agricultural modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security.

Table 4.13: modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	5	7.14
Not Sure	3	4.29
Agree	25	35.71
Strongly Agree	37	52.86
Total	70	100.00

Source: Primary Data, 2015

In table 4.13, it is clear that 52.86% of respondents strongly agreed that agricultural modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples. Further more, this was supplemented by 35.71% of respondents who agreed with the same view implying that, agricultural modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples.

Table 4.14: DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	4	5.71
Not Sure	0	0.00
Agree	28	40.00
Strongly Agree	38	54.29
Total	70	100.00

Source: Primary Data, 2015

In table 4.14, it is clear that 54.29% of respondents strongly agreed that DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate. A view that was supplemented by 40.00% of respondents agreeing with the same though 5.71% disagreed, none of respondents strongly disagreed and were not sure, implying that DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate

Table 4.15: The paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes.

Response	Frequency	Percent
Strongly Disagree	0	0.00
Disagree	3	4.29
Not Sure	0	0.00
Agree	20	28.57
Strongly Agree	47	67.14
Total	70	100.00

Source: Primary Data, 2015

From table 4.15, it can be seen that 67.14% of the respondents strongly agreed that the paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes. This was also supplemented by 28.57% of the respondents who agreed implying that the paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes.

Table 4.16: Modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies

Response	Frequency	Percent
Strongly Disagree	1	1.43
Disagree	18	25.71
Not Sure	0	0.00
Agree	29	41.43
Strongly Agree	21	30.00
Total	70	100.00

Source: Primary Data, 2015

From table 4.16, 41.43% of respondents agreed that agricultural modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies. This was confirmed by 30.00% of respondents strongly agreeing with the same implying that agricultural modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

Under this chapter the researcher discussed and gave conclusion to the major findings of the study, in light of the objectives and research questions. The researcher also presented some recommendations for problems of improving agricultural technology in peasantry societies in Ngetta Sub County, Lira District. The recommendations will suggest some areas that need further study.

5.1 Summary of Findings

5.1.1 Modernisation Strategies for Improving Agricultural Technology in Societies of Ngetta Sub County

It was revealed that Plan for Modernisation of Agriculture (PMA) is a strategy for agricultural modernization in Societies of Ngetta Sub County. This was indicated by the majority of the respondents, that is, 50.00% in this study who strongly agreed that Plan for Modernisation of Agriculture (PMA) is a strategy for agricultural modernization in Societies of Ngetta Sub County. 41.43% of respondents agreed with this view and 8.57% of respondents were not sure whereas 0% number of respondents neither disagreed nor strongly disagreed. It was revealed that Poverty Eradication Action Plan (PEAP) is an agricultural modernisation strategy that has been established by Societies of Ngetta Sub County to improve agricultural technology. This was indicated by the majority of the respondents, that is, 47.14% who agreed that Poverty Eradication Action Plan (PEAP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. 45.71% of the respondents strongly agreed while 7.14% of respondents were not sure and none of respondents strongly disagreed. It was revealed that National Development Plan (NDP) is an agricultural modernisation strategy that has been established by Societies of Ngetta Sub County to improve agricultural technology. This was indicated by the majority of the respondents, that is, 61.43% in this study who strongly agreed that National Development Plan (NDP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. This was followed by 32.86% of respondents who agreed, 5.71% were not sure and none of respondents strongly disagreed or disagreed. It was revealed that Development Strategy and Investment Plan, (DSIP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology.

This was indicated by the majority of the respondents, that is, 58.57% of respondents who agreed that Development Strategy and Investment Plan, (DSIP) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. While 32.86% of respondents strongly agreed and 8.57%, 0% and 0% number of respondents were not sure, disagreeing and strongly disagreeing with this opinion respectively. It was revealed that Presidential Initiative on Banana Industrial Development (PIBID) is an agricultural modernisation strategy that has been established by Societies of Ngetta Sub County to improve agricultural technology. This was indicated by the majority of the respondents, that is, 41.43% of respondents who agreed that Presidential Initiative on Banana Industrial Development (PIBID) is an agricultural modernisation strategy that have been established by Societies of Ngetta Sub County to improve agricultural technology. 21.43% of respondents strongly agreed and the same percentage were for respondents who were not sure. 8.57% and 7.14% of respondents disagreed and strongly disagreed with this statement respectively.

5.1.2 Challenges to Modernisation Strategies

It was revealed that agricultural modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems. This was indicated by the majority of the respondents, that is, 67.14% who strongly agreed that agricultural modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems. This was supported by the view of MAAIF, (2010) which stressed that in the agriculture situation analysis DSIP fails to mention the importance of smallholders, yet this policy is meant to address their food and hunger problems. 11.43% of respondents disagreed while 2.86% of respondents were not sure and none strongly disagreed.

It was revealed that agricultural modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners. This was indicated by the majority that is, 44.29% of respondents who agreed that agricultural modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners. And was supported by the view in MAAIF, (2010). Whereas 27.14% of respondents strongly agreed, 15.71% disagreed with this view. 8.57% were not sure and only 5.71% of respondents strongly disagreed. It was revealed that agricultural modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture. This was indicated by the majority of the respondents, that is, 70.00% of respondents

who strongly agreed that agricultural modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture. 25.71% of respondents agreed, 2.86% disagreed, 1.43% strongly disagreed and 0% was not sure. It was revealed that PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security. This was indicated by the majority of the respondents, that is, 47.16% and 46.59% of respondents respectively who strongly agreed and agreed that the PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security. Only 5.11% of respondents disagreed. It was revealed that smallholder farmers' livelihoods do not lose their food source on the promise of more profit income due to agricultural modernisation strategies. This was indicated by the majority of the respondents, that is, 42.05% who disagreed that smallholder farmers' livelihoods lose their food source on the promise of more profit income due to agricultural modernisation strategies though 32.39% and 19.32% of the respondents strongly agreed, and agreed respectively.

4.4 Relationship between Agriculture Modernisation and Food Production in Peasantry Societies.

It was revealed that agricultural modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies. This was indicated by the majority of the respondents, that is, 51.43% who strongly agreed that agricultural modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies. Also this was complimented by 34.29% of respondents who agreed with this view. Only 12.86% of respondents disagreed. It was revealed that agricultural modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security. This was indicated by the majority of the respondents, that is, 44.29% who strongly agreed that agricultural modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security. Also 31.43% agreed with this view though 22.86% of respondents disagreed. It was revealed that agricultural modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples. This was indicated by the majority of the respondents, that is, 52.86% who strongly agreed that agricultural modernisation strategies shield rural households from global market price shocks,

since the majority are self-sufficient; consuming their own staples. And this was supported by MAAIF, (2010). Further more, this was supplemented by 35.71% of respondents who agreed with the same view. It was revealed that DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate. This was indicated by the majority of the respondents, that is, 54.29% who strongly agreed that DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate. A view that was supplemented by 40.00% of respondents agreeing with the same though 5.71% disagreed, none of respondents strongly disagreed and were not sure. It was revealed that the paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes. This was indicated by the majority of the respondents, that is, 67.14% of the respondents strongly agreed that the paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes. This was also supplemented by 28.57% of the respondents who agreed with the view. It was revealed that agricultural modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies. This was indicated by the majority of the respondents, that is, 41.43% of respondents agreed that agricultural modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies. This was confirmed by 30.00% of respondents who strongly agreed with the same.

5.2 Conclusions of the Study

The main purpose of the research was to understand the contributions and limitations of transforming peasant farming to entrepreneurial agriculture, as manifested in the modernisation strategy. The study was therefore to identify key issues that should be addressed if agriculture transformation is to fulfil its targets of increased food availability and reduction of rural poverty, and will suggest further detailed research on particular issues and the results showed that agriculture modernisation influences directly on food production in peasantry societies. In other words, increased market production, the use of improved seeds and soil enriching fertilisers are regarded as the central elements for agriculture modernisation in peasantry societies, especially in rural areas. Using agriculture modernisation and its advantages is an appropriate competitive tool for addressing food and income insufficiencies. Modernisation strategy reflects a more

positive trajectory towards poverty eradication, expanding the revenue base and increasing incomes. Modernisation strategy is expected to improve rural food supplies, incomes, increase factor efficiency and propel national development. Based on the rationale of the trade for development approach, the transformation result is expected to be a modern agricultural system where farm productivity is high due to the employment of modern agriculture technologies, and incomes and employment levels both rural and urban improve. These expectations have been pursued through the state-driven agriculture modernisation strategy; the first one was the Plan for Modernisation of Agriculture (PMA 2000-2009) followed by the new revised agriculture Development Strategy and Investment Plan 2010-2015 (MAAIF, 2010) with interconnected programmes of (a) Enhancing Production and Productivity (b) Improving Access to Markets and Value Addition; (c) Creating an Enabling Environment, and (d) Institutional Strengthening in the Sector.

However the problems of improving agricultural technology in peasantry societies in Uganda is still a bigger challenge which still requires a broader research to be carried out on agricultural technology because most farmers are illiterate thus making mechanised agricultural technology to remain ineffective in most societies in Uganda. Therefore, there is need for establishing agricultural colleges so as farmers can be enhanced with the knowledge of technology in agriculture. Also farmers should be provided with technological equipments like tractors, weeders, harvesters, incubators and many others so as to make agricultural technology improve in peasantry societies in Uganda.

5.3 Recommendations

Modernisation strategy is a tool that seems to address food and income insufficiencies and is therefore recommended to consider the following;

Agricultural modernisation strategies should aim at orienting subsistence farmers towards the market.

Agricultural modernisation strategies should transform subsistence farming to commercial agriculture.

Implementers of agricultural modernisation strategies should understand the poor farmers from different perspectives. It should not only target 'beneficiaries' who are subsistence farmers as much as it recognised than all other category farmers.

Agricultural modernisation strategies should not consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.

Implementers of agricultural modernisation strategies should improve capacity for regulation and enforcement especially in safety standards and quality assurance across crops, livestock and fisheries.

Implementers of agricultural modernisation strategies should make sure that farmers have improved access to high quality inputs, planting and stocking materials.

Agricultural modernisation strategies should have expanded network of rural market infrastructure including appropriate structures to improve post-harvest losses

5.4 Areas for Future Research

This study has proven that agriculture modernisation strategies influence directly on food production in peasantry societies. It is suggested that future research be carried out on the impact of agriculture modernisation strategies on poverty reduction; the priority areas for the modernisation strategy and the relationship between food crisis and high poverty levels in the rural economy.

REFERENCES

- Aleem, Irfan and Kasekende, Louis (1999) *Reforming Finance in a Low Income Country: Uganda*. Kampala: The World Bank, The Bank of Uganda.
- Baffoe, J. K. (2000) *Structural Adjustment and Agriculture in Uganda*. Geneva: International Labour Organisation (ILO), Sectoral Activities Programme.
- Belshaw, D. (et. al.) (1997) 'A Decade of Structural Adjustment in Uganda: Agricultural Tradables, Rural Poverty and Macroeconomic 'Success'', in M. Spoor (ed.) *The 'Market Panacea': Agrarian Transformation in Developing Countries and Former Socialist Economies*. Wheaton Exeter: Intermediate Technology Publications, pp. 77-92.
- CAADP – Comprehensive Africa Agriculture Development Program (2010) Uganda CAADP Compact to Support the Successful Implementation of the Agricultural Sector Development Strategy and Investment Plan (DSIP). Available at: <http://www.caadp.net/library-country-status-updates.php> (accessed September 2011)
- DENIVA – Development Network of Indigenous Voluntary Associations (2005) *Uganda: Trade Liberalisation and Its Impact On Poverty: Country Background, Paper Final Report*. Kampala, Uganda: DENIVA, TDP Project. Available at: http://www.deniva.or.ug/files/programme-agriculturetrade_research_backgrounder.pdf (accessed November, 2011)
- IMF – International Monetary Fund (2010) *Uganda, Poverty Reduction Strategy Paper—Joint Staff Advisory: Country Report No. 10/142*. Washington, D.C.: International Monetary Fund Publication Services Available at: <http://www.imf.org/external/pubs/ft/scr/2010/cr10142.pdf> (accessed October 2011)
- Jørgensen, J.J. (1981) *Uganda: A Modern History*. London: Croom Helm.
- MAAIF –Ministry of Agriculture, Animal Industry and Fisheries (2000) *Plan for Modernisation of Agriculture: Eradicating Poverty in Uganda: Government Strategy and Operational Framework*. Kampala: Ministry of Agriculture, Animal Industry and Fisheries, and Uganda Ministry of Finance, Planning and Economic Development.
- MAAIF – Ministry of Agriculture, Animal Industry and Fisheries (2010) *Agriculture for Food and Income Security: Agriculture Sector Development Strategy and Investment Plan: 2010/11- 2014-15*. Republic of Uganda. Available at: www.caadp.net/pdf/Investment%20Plan-uganda.pdf (accessed May 2011)

- MFPE – Ministry of Finance, Planning and Economic Development (2010) *Support to Uganda's Agricultural Sector Development Strategy and Investment Plan (DSIP): Funding proposal For Global Agriculture and Food Security Program (GAFSP)*. Kampala, Uganda. Available at: http://www.gafspfund.org/gafsp/sites/gafspfund.org/files/Documents/Uganda_3_of_6_Proposal.pdf (accessed October 2010)
- Mukiibi, J.K. (2001) *Agriculture in Uganda*. Kampala: Fountain Publishers.
- Murphy, S. (2010) 'Free Trade in Agriculture: A Bad Idea Whose Time is Done', in F. Magdoff and Tokar B. (eds.) *Agriculture and Food in Crisis*. New York: Monthly Review Press, pp. 103-120.
- Museveni, Y. K. (1992) *What is Africa's Problem?* Kampala: NRM Publications.
- Museveni, Y. K. (2008) President of the Republic of Uganda. Speech At the International Banana Conference 2008, Mombasa, Kenya. http://www.banana2008.com/cms/details/index_details.aspx (Accessed June 2011)
- Museveni, Y. K (2011a) *Bonabagagawale Official Launch*. Kampala: Office of the President, Uganda Media Centre. Available at: <http://www.mediacentre.go.ug/details.php?catId=6&item=28> (accessed October 2011)
- Museveni, Y. K (2011b) *Cultivate Jatropha Plant*. Kampala: Office of the President, Uganda Media Centre. Available at: <http://www.mediacentre.go.ug/details.php?catId=4&item=1329> (accessed October 2011)
- NDP – Republic of Uganda (2010) *The National Development Plan 2010/11 – 2014/15*. Kampala: Government of Uganda.
- Nyangabyaki, B. (2000) *The Limits of Agricultural Reforms in Contemporary Uganda*. Uppsala: The Nordic Africa Institute. Available at: <http://www.nai.uu.se/publications/news/archives/003bazaara/> (accessed October 2011)
- Nyangabyaki, B. (2001) *Impact of Liberalisation on Agriculture and Food Security in Uganda: Final Report*. Kampala: Centre for Basic Research.
- Ploeg, Jan Douwe van der (1997) 'On Rurality, Rural Development and Rural Sociology', in H. De Haan and N. Long (eds.) *Images and Realities of Rural Life: Wageningen Perspectives on Rural Transformations*. Assen, The Netherlands: Van Gorcum & Comp, pp. 39-74.

- Ploeg, Jan Douwe van der (2008) *The New Peasantries Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London: Earthscan.
- Ploeg, Jan Douwe van der (n.d.) *The Peasant Mode of Production Revisited*. [online] Available at: <http://www.jandouwevanderploeg.com/EN/publications/articles/the-peasant-mode-of-production-revisited/> (accessed October 2011).
- World Bank (2010) *Country Assistance Strategy for the Republic Of Uganda*. International Development Association, International Finance Corporation and Multilateral Investment Guarantee Agency. Report no. 54187-ug; World Bank. Available at: http://siteresources.worldbank.org/UGANDAEXTN/Resources/Uganda_CAS.pdf (accessed October 2010)
- WTO – World Trade Organisation (1995) *Uganda Trade Policy Review*. Report by the Secretariat – Summary Observations. Available at: http://www.wto.org/english/tratop_e/tpr_e/tp12_e.htm (accessed October 2011)
- WTO – World Trade Organisation (2011) *Marrakesh Agreement Establishing the World Trade Organization*. Available at: http://www.wto.org/english/docs_e/legal_e/04-wto_e.htm (accessed November 2011)

APPENDICES

APPENDIX A

SELF ADMINISTERED QUESTIONNAIRE

Dear Respondents;

I Apio Caroline a student of Kampala International University of College of Humanities and Social Sciences finalizing my Degree in Bachelors of Development Studies. As part of my requirement for the degree award, I have to present a dissertation. The study is on Problems of Improving Agricultural Technology in Peasantry Societies in Uganda. A case study of Ngetta Sub County, Lira District

I am now on my field part of collecting information for my dissertation and you are being requested to respond to the various questions in the questionnaire attached. This interview will be treated with the strictest confidentiality. It would therefore be greatly appreciated if you would answer all questions in a fair and open manner. The information gathered from this questionnaire will be used purely for research purposes. Thank you for taking the time and effort to complete this questionnaire. Your cooperation is greatly appreciated. Your participation is voluntary and you may withdraw from the survey at any stage. I shall be grateful for your co operation in this regard.

Thank you.

Apio Caroline (Candidate)

SECTION A: BIOGRAPHICAL DATA

Please place a cross (X) in the block that applies to you.

1. AGE

Under 20	<input type="checkbox"/>	21-30	<input type="checkbox"/>	31-40	<input type="checkbox"/>
41-50	<input type="checkbox"/>	51-60	<input type="checkbox"/>	61 and Above	<input type="checkbox"/>

2. GENDER

Male	<input type="checkbox"/>	Female	<input type="checkbox"/>
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3. HIGHEST EDUCATION LEVEL

Below Certificate	<input type="checkbox"/>	Certificate	<input type="checkbox"/>
Diploma	<input type="checkbox"/>	Degree	<input type="checkbox"/>
Post-Graduate Qualification	<input type="checkbox"/>		

Other (Specify).....

4. MARITAL STATUS

Single ☐

Married ☐

Divorced ☐

5. WORKING EXPERIENCE IN YEARS

1 – 5 ☐

6 – 10 ☐

11 – 15 ☐

16 – 20 ☐

21 – 25 ☐

26 and above ☐

6. POSITION/JOB TITLE IN THE SUB COUNTY (Please Specify Below)

.....

Please indicate the extent to which you disagree or agree with each of the following statements.

Please indicate your preference by marking with a cross (X) in the appropriate block provided.

- | | | |
|---|-------------------|----|
| 1 | Strongly Disagree | SD |
| 2 | Disagree | D |
| 3 | Not Sure | N |
| 4 | Agree | A |
| 5 | Strongly Agree | SA |

SECTION B: MODERNISATION STRATEGIES FOR IMPROVING AGRICULTURAL TECHNOLOGY IN NGETTA SUBCOUNTY

No	QUESTION	SD	D	N	A	SA
	The following are the modernisation strategies that have been established by Ngetta Sub County to improve agricultural technology					
1.	Plan for Modernisation of Agriculture (PMA)					
2.	Poverty Eradication Action Plan (PEAP)					
3.	National Development Plan (NDP)					
4.	Development Strategy and Investment Plan, (DSIP)					
5.	Presidential Initiative on Banana Industrial Development (PIBID)					
	In Ngetta sub county, modernisation strategies are applied to					

the following food crops						
6.	Rice					
7.	Maize					
8.	Millet					
9.	Cassava					
10.	Potatoes					
11.	Sweet potatoes					
12.	Groundnuts					
13.	Bananas					

SECTION C: CHALLENGES TO MODERNISATION STRATEGIES

Nº	QUESTION	SD	D	N	A	SA
1.	Modernisation strategies fail to mention the importance of smallholders, yet it is meant to address their food and hunger problems.					
2.	Modernisation strategies bundle the peasants within the sector stakeholders, their needs and values being taken as similar to those of the private investors and development partners					
3.	Modernisation strategies consider peasantry as the unwilling system that has failed to give up its traditional methods and economic and political autonomy, making it difficult to modernise and develop agriculture.					
4.	The PIBID and DSIP allocate food to external markets while draining domestic markets which is not the solution to food security.					
5.	Smallholder farmers' livelihoods lose their food source on the promise of more profit income due to modernisation					

strategies					
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SECTION D: RELATIONSHIP BETWEEN AGRICULTURE MODERNISATION AND FOOD PRODUCTION IN PEASANTRY SOCIETIES

Nº	QUESTION	SD	D	N	A	SA
1.	Modernisation strategies play a double role of generating income and keeping food in the local markets, which would ensure sustained food supplies					
2.	Modernisation strategies focus on improving the purchasing power of rural households by increasing their incomes through off-farm and on-farm non-agriculture activities as the strategy for improving food and nutrition security.					
3.	Modernisation strategies shield rural households from global market price shocks, since the majority are self-sufficient; consuming their own staples					
4.	DSIP and PIBID are devised for exporting a greater amount of agricultural products thus the increase in food production will not be felt at household level with more food on the plate					
5.	The paradox of developing agriculture is that there is potential for considerable wealth, but the local peasants and farmers are side-lined from having real benefits from these changes.					
6.	Modernisation strategies on agriculture's ability of generating income for the poor, particularly women, is more important for food security than its ability to increase local food supplies					

***“Thank you for taking the time and effort
to complete this questionnaire”***

APPENDIX A

INTERVIEW GUIDE

Dear Respondents;

I Apio Caroline a student of Kampala International University of College of Humanities and Social Sciences finalizing my Degree in Bachelors of Development Studies. As part of my requirement for the degree award, I have to present a dissertation. The study is on Problems of Improving Agricultural Technology in Peasantry Societies in Uganda. A case study of Ngetta Sub County, Lira District

I am now on my field part of collecting information for my dissertation and you are being requested to respond to the various questions in the questionnaire attached. This interview will be treated with the strictest confidentiality. It would therefore be greatly appreciated if you would answer all questions in a fair and open manner. The information gathered from this questionnaire will be used purely for research purposes. Thank you for taking the time and effort to complete this questionnaire. Your cooperation is greatly appreciated. Your participation is voluntary and you may withdraw from the survey at any stage. I shall be grateful for your co operation in this regard.

Thank you.

Apio Caroline (Candidate)

1. Gender of the respondent
2. Marital Status of the respondent
3. Age of the respondent
4. Education Level of the respondent
5. Are there any modernisation strategies established to improve agricultural technology in peasantry societies at Ngetta Sub County?
6. Are there any challenges to modernisation strategies established to improve agricultural technology in peasantry societies at Ngetta Sub County?
7. Is there any relationship between agriculture modernisation and food production in peasantry societies?

***“Thank you for taking the time and effort
to complete this questionnaire”***

APPENDIX C

TIME FRAME

Item/Time	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Feb 2015
Data Collection					
Data Analysis					
Data Presentation					
Clear Report Writing/ Dissertation					

APPENDIX D

ACTUAL STUDY BUDGET

Item	Quality/quantity	Unit cost	Total cost
Proposal Writing			
Stationary			
Ruled paper	2 reams	10,000=	20,000=
Note book	4	2,500=	10,000=
Printing	37 pages	500=	18,500=
Photocopying	20 pages	100=	2,000=
Pens	1 box	3,000=	3,000=
Box file	2	5,000=	10,000=
Clip board	2	3,500=	7,000=
Sub Total			70,500=
Data Collection			
Allowance	6 days	20,000=	120,000=
Sub Total			188,000=
Data Analysis			
Transcription allowance	6 days	20,000=	120,000=
Analysis allowance	6 days	20,000=	120,000=
Sub Total			240,000=
Report Writing			
Secretarial services			
Typing	50 pages	500 per page	25,000=
Printing	50 pages	500 per page	25,000=
Photocopying	50 pages	100 per page	
Binding	4 books	20,000= each	80,000=
Sub Total			135,000=

APPENDIX E

Source: MAAIF, 2010: Pg.13

Appendix E. DSIP Summary			
The vision	A Competitive, Profitable and Sustainable Agricultural Sector		
Development Objectives	<p>Rural incomes and livelihoods increased</p> <p>Household food and nutrition security improved</p>		
Immediate Objectives	<p>Factor productivity (land, labour, capital) in crops, livestock, and fisheries sustainably enhanced.</p> <p>Markets for primary and secondary agricultural products within Uganda, the region and beyond developed and sustained.</p> <p>Favourable legal, policy and institutional frameworks that facilitate private sector expansion and increased profitability along the entire value chain developed.</p> <p>MAAIF and Agencies functioning as a modern, client-oriented organisation within an innovative, accountable, support environment</p>		
Programme 1: Production and Productivity	Programme 2: Markets and Value addition	Programme 3: The enabling Environment	Programme 4: Institutional Strengthening
<i>Sub-programme Objectives</i>			