

**INFLUENCE OF LAND TENURE ON COTTON PRODUCTION IN KALAIT SUB
COUNTY.**

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**A RESEARCH REPORT SUBMITTED TO THE DEPARTMENT OF AGRICULTURE
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ABSTRACT.

Tenure Security Provides Incentives for Sustainable Land Uses Practices, Long-Term Investment, and positively affects Rural Livelihoods Strategies and Poverty Reduction. Tenure insecurity is globally a critical issue for most of the poorest. This research analyses the influence of land tenure system on cotton production among the small holder farmers in Kalait sub county Tororo district in eastern Uganda.

The research employed a mixed methods approach, combining quantitative data from surveys conducted across multiple farming communities with qualitative interviews to capture the bad experience of the farmers regarding their land tenure situations. The findings reveal that secure land tenure positively correlates with the increased investments in cotton production practices, access to credit facilities, and over rally yield improvements. Conversely, insecure tenure arrangements lead to hesitancy in making long term investments in soil fertility and crop management

Additionally, the study highlights how socio-economic factors such as gender dynamics and local governance structures further influence the relationship between land tenure and cotton production for instance, female farmers often faced additional barriers under customary land tenure systems that limit their ability to access resources necessary for enhancing productivity

The implications of this research are significant for policy maker's aiming to improve agricultural output among the small holder farmers particularly in Kalait Sub County. By recognizing the critical role of secure land tenure in fostering sustainable agricultural practices, interventions can be designed to strengthen property rights and promote equitable access to land

resources. Ultimately, this study contributes to a deeper understanding of how institutional frameworks surrounding land ownership impact agricultural development in rural economies.

DECLARATION

I Oliauna Elisha hereby declare that this research report is original and is as a result of my efforts. It has never been submitted to any institution of learning or otherwise for any reward for degree, certificate and where such information is used, due recognition is fully acknowledged or cited.

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SIGNATURE 

APPROVAL

I certify that this research satisfies the partial fulfillment of the requirement for the award of Bachelor's degree in Science Education.

SUPERVISOR'S NAME: DR OKIROR JOHN

SIGNATURE.......... DATE 19/9/2024

DEDICATION.

I dedicate this research report to my dearest parents Mr. Omaset Paul and Mrs. Aware Kana , my grandparents Nehemia Mamai and Atyang Perez.

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LIST OF ACRONYMS

GDP: Gross Domestic Product

I.E: That's To Say

CDO: Cotton Development Organization

WF: World Food Program.

FAO: Food and Agricultural Organization

LTS: Land Tenure System

CHAPTER ONE

INTRODUCTION

1.1. Introduction

This study targets at examining the influence of land tenure system on the cotton production among the small-scale farmers in Kalait Sub-County, Tororo District. The specific objectives of this study were mainly three (3) namely; To identify the land tenure system and issues in Kalait Sub-County, Analyze the impact of different land tenure system on cotton yield, income and food security of small holder farmers, and discuss the possible solutions for addressing the issue of land tenure system on cotton yield, income and food security of small holders' farmers in Kalait Subcounty, Tororo District. In addition, this chapter also contains the background, statement of the problem, research questions, significance, scope and definition of key terms being used on the study.

1.2. Back ground of study

1.2.0. Historical background

Globally, almost one billion people are thought to live under insecure tenure arrangements, with wide-ranging consequences for their livelihoods (Prindex, 2020). Estimates for tenure insecurity prevalence differ widely, a survey carried out in 140 countries between 2016 and 2020 found perceived tenure insecurity shares of between 2% (Turkmenistan) and 48% (Philippines) of the population (*ibid.*). Those households do not have the security of fully controlling the land they use and depend on, worrying that they may lose their claim. Tenure Security is often defined as

“the certainty that a person’s rights to land will be recognized by others and protected in cases of specific challenges” (fao, 2002, 3.31).

However In the detailed tapestry of agriculture, the threads of land tenure systems weave a complex pattern, deeply influencing the yield of cotton fields in the hands of small-scale farmers. As I unravel this relationship, I uncovered the profound impact that ownership and land rights have on the cultivation of this vital crop. This study would like to examine the influence of land tenure system on the cotton production among the small-scale farmers. in Kalait Sub-County, Tororo District. According to the Land Tenure Security in Selected Countries – Global Report 2015, Land tenure systems are the product of historical and cultural factors and they reflect the relationships between people, society and land (Payne, 2002). Land tenure comprises the customary and/or legal/statutory rights that individuals or groups have to land and related resources, and the resulting social relationships between the members of society (Kuhnen, 1982). Each country has developed specific land tenure concepts that are based on historical and current values and norms. The concepts that determine the present tenure systems and they have often been shaped by an evolutionary process. In many cases, endogenous forces act as drivers that sharpen and change tenure systems, for example population growth, industrialization and urbanization, or accelerating natural resource exploitation.

1.2.1 Conceptual background

According to the 1995 Constitution, land belongs to the people and in practice too traditional land tenure is dictated by the subsistence agriculture system. Equally important, in terms of access to additional land, is the management of the existing one. In Uganda like other countries

in east Africa, agricultural productivity is threatened by land degradation, erosion and loss of soil fertility.

Land is widely recognized as a pivotal element of Uganda's economic and social transformation, as evidenced by the government's ambition to improve tenure security, and systematically title all land by 2040. Approximately 70% of Uganda's working population is employed in the agricultural sector and ranks first in terms of the labor force in the Ugandan economy. In 2021, agriculture accounted for about 23.7% of GDP and 31% of export earnings. Hence, agriculture is strategically vital to poverty reduction, especially in rural areas where most of the population is employed in the agricultural sector. In addition, food security, gender equality, and mitigation against the effects of a changing climate cannot be achieved unless issues of access to land, security of tenure and the capacity to use land productively and in a sustainable manner are addressed. Therefore, any attempt to alleviate poverty must be centered on reinforcement of land rights and opportunities arising from land and agriculture. Customary land tenure is Uganda's most dominant land tenure, accounting for over 80% of the land which is administered according to customary rules and practices of that geographical or culturally defined area. Most communities and families who access land through this tenure do not have formal documentation because this land is not officially registered. Land users on customary lands face several challenges such as dispossession of their land due to increasing land scarcity caused by the high population growth, environmental degradation, changing climate conditions, and land conflicts, among others. In all customary tenure regimes in Uganda, women's land rights are secondary to, and weaker than those of men. Moreover, wetlands in Uganda are presently under increasing threat due to encroachment. Therefore, there is an urgent need to integrate land tenure security efforts and land use planning to underpin the sustainable use of land whilst preserving natural

resources. GLTN, as facilitated by UN-Habitat, is addressing these issues through the “Scaling up Community-based Land Registration and Land use Planning on Customary Land in Uganda “. The initiative is a four-year project implemented in two phases: the consolidation phase one (1.5 years) and the scaling up phase two (2.5 years). Phase one is being implemented in two (2) agro production zones in Uganda, i.e. South Western region (Kabale) and Kyoga Plains (Butaleja). Phase two will be implemented based on the experiences of phase one in the West Nile and Elgon regions of Uganda. The project strongly focuses on national and local strategic partnerships, prioritising improving rural smallholder farmers’ tenure security and implementing capacity development initiatives, and builds on a previous successful pilot project, “Securing Land Tenure for Improved Food Security in Select Areas in Uganda” which was operational between November 2017 to March 2020.

1.2.2 Theoretical background

The theoretical background of the influence of land tenure systems on cotton production among small-scale farmers in Uganda can be framed within several theories and concepts: Property Rights Theory: This theory posits that secure property rights are essential for economic development. Secure land tenure gives farmers the confidence to invest in their land, leading to increased productivity and sustainable agricultural practices, which are beneficial for cotton production (Deininger, 2003), Transaction Cost Economics: This concept suggests that unclear land tenure can increase transaction costs associated with land use, such as costs related to conflicts over land rights or negotiations for land access. Reducing these costs through clear land tenure systems can improve efficiency and productivity in cotton farming (Williamson, 1981), Institutional Economics: This field of economics emphasizes the role of institutions, including

legal frameworks and property rights, in shaping economic behavior. Effective land tenure systems are considered institutions that can incentivize small-scale farmers to improve cotton production (North, 1990), Sustainable Livelihood Framework: This framework considers secure access to resources, including land, as one of the key capitals that enable households to build sustainable livelihoods. For small-scale cotton farmers in Uganda, secure land tenure is a critical asset that supports their livelihood strategies (DFID, 1999), and Gender and Land Rights: Gender theories highlight the importance of ensuring women's land rights, as women play a significant role in agriculture in Uganda. Equitable land tenure systems that recognize women's rights can contribute to enhanced cotton production by empowering female farmers (Agarwal, 1994).

1.3. Statement of The problem.

In Kalait sub county of Tororo District, small-scale cotton farming represents a vital component of the local economy and the livelihoods of many households. Despite its importance, cotton production has been stagnating or even declining in recent years. Preliminary observations suggest that the land tenure system may be a contributing factor to this trend. The current land tenure arrangements, which encompass both customary and formal ownership, have led to issues such as land disputes, insecure land holdings, and lack of clear land rights. These challenges have been linked to inadequate investment in land improvement and agricultural best practices, resulting in lower cotton yields and reduced income for farmers. This research seeks to explore how the land tenure system in Kalait Subcounty, Tororo District, impacts on cotton production among small-scale farmers and to propose recommendations that could help improve productivity and economic outcomes for these farmers.

1.4.0. General Objective.

The general objective of this study was to analyze land issues affecting farmers efforts to improve agricultural practices for cotton production.

1.4.1. Specific Objectives.

Specifically, this study sought to address the following objectives;

To identify the land tenure system and issues in Kalait sub-county

To analyze the impact of different land tenure system on cotton yield, income and food security of small holder farmers.

To determine possible solutions to land tenure issues affecting cotton yields, income and food security

1.4. Research Questions.

In order to answer the above questions the following research questions were posited:

1. How does the land tenure system impact cotton production among the smallholder farmers in kalait Sub County.
2. Which type of land tenure system is found in kalait Sub County?
3. What are the possible solutions for the impacts of cotton production among the smallholder farmers in kalait sub county tororo district?

1.5. Scope of the study

The study was carried out in Tororo district Kalait sub-county. Specifically, the study was to examine the influence of land tenure system on cotton production among the small holder farmers in Kalait Sub County

1.6 Research Hypotheses.

Hypothesis 1: Secure Land Tenure Increases Cotton Production Investment Smallholder farmers with secure land tenure are more likely to invest in cotton production compared to those with insecure land tenure. This is because secure land tenure provides farmers with the confidence to make long-term investments in their land, such as improving soil fertility and terracing, which can increase cotton yields.

Hypothesis 2: Land Tenure Security Enhances Access to Credit for Cotton Production Smallholder farmers with secure land tenure have better access to credit for cotton production than those with insecure land tenure. Secure land tenure can serve as collateral for loans, enabling farmers to access the necessary resources to purchase inputs and improve their production (Deininger & Feder, 2009).

Hypothesis 3: Secure Land Tenure Promotes Technology Adoption in Cotton Production Smallholder farmers with secure land tenure is more likely to adopt new technologies in cotton production than those with insecure land tenure. Secure land tenure provides farmers with the confidence to invest in new technologies, such as improved seed varieties and irrigation systems, which can increase cotton yields (Kabunga et al., 2012).

1.7. Significance of the Study:

The significance of the study on the influence of land tenure systems on cotton production among small-scale farmers in kalait sub-county, Tororo District, Uganda, is multifaceted: Economic Impact: Understanding the relationship between land tenure and cotton production can inform policies that enhance the economic well-being of small-scale farmers, leading to increased income and poverty reduction in the region. Agricultural Productivity: The study can identify how land tenure security or insecurity affects agricultural practices and productivity, providing insights into how to boost cotton yields and improve food security. Sustainable Development: Insights from this research can contribute to sustainable land management practices, ensuring that cotton production does not compromise environmental health or future agricultural potential. Social Equity: By examining the effects of land tenure systems on different groups, including women and marginalized communities, the study can promote social equity in access to land and economic resources. Policy Formulation: The findings can aid policymakers in designing and implementing land reforms that support small-scale cotton farmers, fostering a more vibrant and resilient agricultural sector. Overall, the study aims to provide actionable recommendations that can lead to more effective land tenure arrangements, thereby enhancing cotton production and contributing to the broader development goals of, Tororo District, and Uganda as a whole.

1.8. Justification of the Study.

The choice of researching the influence of the land tenure system on cotton production among small holder farmers in Kalait Sub County, Tororo District was significant due to several reasons. Firstly, understanding how the land tenure system affects cotton production was crucial for sustainable agricultural development in the sub county of kalait. Cotton was a major cash

crop in Uganda, contributing significantly to the country's economy and providing livelihoods for many small holder farmers. Therefore, investigating how the land tenure system influences cotton production provided valuable insights into improving agricultural productivity and farmers' welfare. Secondly, the issue of land tenure was a critical aspect of agricultural development in many developing countries, including Uganda. The land tenure system determines farmers' access to land, which is a fundamental resource for agricultural production. In many cases, insecure land tenure arrangements can hinder farmers' ability to invest in their farms and adopt modern agricultural practices, thus affecting productivity. By focusing on how the land tenure system specifically impacts cotton production among small holder farmers in Kalait Sub County, this research shed light on the challenges faced by farmers in the region and proposes potential solutions to improve their situation.

Moreover, studying the influence of the land tenure system on cotton production at the local level in Kalait Sub County provided context-specific findings that informed policy decisions and interventions tailored to the needs of small holder farmers in that particular area. By conducting this research, policymakers, agricultural extension services, and other stakeholders can better understand the dynamics between land tenure arrangements and cotton production, leading to more targeted interventions that supported small holder farmers and promote sustainable agricultural development.

1.9. Time Scope

The study used primary data that was collected in June 2024. The data collected looked at the prevailing land tenure systems at the time as well as the ones that existed in before. The impact of land tenure system that is existing at a moment was looked at.

1.10 Geographical Area.

The study was carried out in Tororo district, kalait Sub County. Kalait sub-county is within Tororo County south, Tororo District, newly created sub-county extracted from former kwapa sub-county. The area comprises of 5 parishes and close to over 100 villages.

1.11 Operational Definitions

1. Land Tenure System: A land tenure system refers to the way land is owned and managed, including the rights individuals or groups have to use, control, and transfer land, as well as the associated responsibilities and restrictions. It encompasses a range of ownership patterns, from private to communal and customary to statutory.

2. Smallholder Farmers: Smallholder farmers are individuals or families who manage agricultural plots of land that are smaller than the average size for farms in their region. They typically use family labor for farming activities and rely on their crops for both food security and income.

3. Cotton: Cotton is a natural fiber harvested from the cotton plant's seedpod. It is a key agricultural commodity used primarily in the textile industry for making fabrics due to its softness, breathability, and durability.

4. Cotton Production: Cotton production involves the entire process from planting cotton seeds to harvesting the cotton bolls. It includes land preparation, sowing, crop management (such as irrigation, fertilization, pest control), harvesting, ginning (separating fibers from seeds), and often marketing the raw cotton.

5. Secure land tenure. This refers to the recognized and protected rights individuals or groups have over land and related resources.

6. Tenure security. Refers to the rights of individuals and groups to effective protection against forced evictions and arbitrary deprivation of their land or housing.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The review of the literature was carried out in accordance with the study objectives as follows: overview of land tenure systems in Uganda; land tenure issues in Tororo district; effects of land tenure on agricultural production and productivity; and influence of land tenure practices on cotton production

2.2. Theme 1: land tenure system and issues

According to the study conducted by Murken and Gornott (2022) titled the importance of different land tenure systems for farmers' response to climate change: A systematic review. Reviewed, identified and understood how land tenure systems influence farmers' ability to withstand climate change and how climate change is operationalized in such studies. They deployed review and analysis process where 106 mostly peer-reviewed studies were examined using thematic network analysis and a network of interactions between land tenure and climate change in farming contexts is devised. There results showed that three main interactions link land tenure systems and climate change with regard to agricultural livelihoods: (i) land tenure characteristics influence farmers' adaptation uptake, type and intensity, (ii) certain tenure settings contribute to vulnerability of different socio-demographic groups in agricultural systems, e.g. women, migrants and indigenous communities, and (iii) the perception of tenure security itself is affected by climate change but the limitation in this study is that ,this study used review and analysis process as data collection method which did not give the clear experiences of

farmers but in my study I will use qualitative methodology which will give the experiences of farmers on land tenure system hence the findings will not be similar.

In another study conducted by Chitonge, Harvey, (2021), highlighted the major land governance challenges and the consequences of weak and ineffective land governance systems, used qualitative methodology and deployed discussions to African citizens in Africa. The discussion in this chapter confirmed that African countries have not yet found a formula to address land tenure relations in a way that leads to fair and equitable distribution of land. They argued that when land is governed efficiently, it can make significant contribution to reducing poverty, inequality, and economic exclusion. But the gap in this study is that, Chitonge, and Harvey highlighted the major land governance challenges and the consequences of weak and ineffective land governance systems. Whereas my study will examine the influence of land tenure system on the cotton production among the small-scale farmers in Tororo District, Uganda.

(2022.) "Land Tenure and Cotton Farmers' Land Improvement: Evidence from State-Owned Farms in Xinjiang, China. This article develops a dynamic model to examine how land tenure influences farmers' decisions on land improvement. It then analyzes this relationship based on cotton farmers' household-level data from state-owned farms of Xinjiang in China. They applied methods that took into account the possible endogeneity of the land tenure. The results reveal that the stability of land tenure in the past will not affect the current behavior of farmers for they have a relatively stable expectation of current land tenure and a high degree of trust in the government and its policies. The intergenerational transfer of land tenure is not the key factor that affects farmers' land conservation, and the relatively long-term duration of land tenure (possibly five years or more) during their careers is more important. Their findings also revealed

that non-property factors, such as government intervention (e.g., technology promotion) that alleviates the limited rationality of farmers, cannot be ignored because they played a crucial role in past land improvement when land tenure was less stable. But the limitation of this study is that this study was conducted in Xinjiang in China a developed country whereas my study will be conducted in Tororo, Uganda which is a developing country and the findings will not be the same.

Another study conducted by Tom Lavers, 2018, responding to land-based conflict in Ethiopia: The land rights of ethnic minorities under federalism, African Affairs. Argues that the institutionalization of ethnic federalism and the persistence of neo-customary tenure result in considerable ambiguity, particularly regarding the land rights of non-indigenous minorities. The analysis highlights tensions between these three sets of land tenure institutions state ownership, ethnic federalism and neo-customary tenure—and their implications for minority land rights. he used qualitative methods of data collection and He found out that in the case study of land-based conflict in Oromiya region, based on fieldwork conducted in 2009 and 2010, demonstrates the continuing relevance of these land tenure institutions and associated ideas in land debates in Ethiopia, both in terms of the use of these ideas by protagonists as means of justifying land claims, and the ambiguous state response to the conflict, which goes well beyond the provisions of the land policy. As such, while there are certainly particular characteristics of the Ethiopian case, many of the key issues regarding ethnicity and land mirror debates taking place across the continent.

2.3. Theme 2: impact of land tenure on cotton yield, income and food security

According to the study by Ibrahim,., Hendriks, & Schönfeldt, (2023) examined the association between land tenure and food security among 1434 sampled smallholders from the Nigeria Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA). They found out that the cohabitations in Nigeria are novel and will serve as a lesson to other African settings where similar land tenure and agricultural conditions persist.

In another study Li, Wang and Lu (2021) developed a dynamic model to examine how land tenure influences farmers' decisions on land improvement. They used mixed methodology and deployed Theoretical Analysis and Data and Sample Description to cotton farmers in State-Owned Farms in Xinjiang, China. Their results revealed that the stability of land tenure in the past will not affect the current behavior of farmers for they have a relatively stable expectation of current land tenure and a high degree of trust in the government and its policies. The intergenerational transfer of land tenure is not the key factor that affects farmers' land conservation; however, a relatively long-term duration of land tenure (five years or more) is more important. Their findings also revealed that non-property factors, such as government intervention (e.g., technology promotion) that alleviates the limited rationality of farmers, cannot be ignored because they played a crucial role in past land improvement when land tenure was less stable. However the limitation of this study is that, this study was conducted in Owned Farms in Xinjiang, China a developed country but my study will be conducted in Uganda which is a developing country hence the results will not be the same.

Oulavanh Keovilignavong and Diana Suhardiman (2020) also in their study looked at how farm households perceive security of tenure in relation to food security, and how these perceptions

evolve throughout different policy periods in Laos. They showed how perceived and de-facto land tenure insecurity pushes farmers to explore alternative strategies and avenues to ensure food supply, through farm and non-farm employment. From a policy perspective, their paper highlights the need to put people's livelihoods at the center of land governance, thus moving beyond the current positioning of land as merely a means for agricultural production or environmental conservation. But the limitation of this study is that, this study was conducted in Laos, south East Asia which is a developed country whereas my study will be conducted in Uganda which is a developing country and the findings will not be the same.

2.4. Theme 3: the possible solutions to land tenure system in kalait sub county

According to the study conducted by Musinguzi, Enemark and Mwesigye (2021) identified that pilot projects are beneficial in highlighting specific gaps in spatial, legal and institutional frameworks

In another study conducted by Dieterle, C. (2021) Tiled Global Governance Meets Local Land Tenure: International Codes of Conduct for Responsible Land Investments in Uganda. Based on 8 months of fieldwork in Uganda, he compared three cases of large-scale land investments in different settings and he argued that variation in the underlying land tenure systems determines the variation, uneven applicability and effectiveness of global governance mechanisms. During eight months of fieldwork in Uganda in 2018, he collected information on 14 large-scale land investments from secondary and grey literature and conducted over 100 interviews and 10 focus group discussions with smallholder farmers. The investment projects span different regions of the country, different systems of land tenure and governance, and different commodity sectors, including forestry, palm oil, sugarcane, coffee, tea, and other agricultural crops. Of the 14 cases,

he selected three cases to illustrate the correlation between land tenure regime and the way that international guidelines work as observed in his larger sample of cases. These three cases capture the main lines of contrast across investment cases on Mailo, state, and customary land. The limitation of the study is that, Dieterle interviewed 100 participants and conducted 10 focus group discussions but in my study, I will only interview 8 in participants and the findings will not be the same.

Holden, (2020) in their study titled Policies for Improved Food Security: The Roles of Land Tenure Policies and Land Markets. The used qualitative methodology to assess African citizens. And they found out that, population growth, land degradation, climate change, urban expansion and changing diets are contributing to increasing land scarcity and strong demand for land use intensification to meet future food demands. Uncertainties in terms of timing and severity of agro climatic and other shocks, including social and political instability, are threatening vulnerable developing economies and their systems of governance. And they concluded that there is a need for a rapid transformation from rural to urban livelihoods for many in developing countries, while still facilitating absorption of more people on small farms in rural areas in the years to come. This is especially the case in Africa, where there are still large rural populations continuing to grow at a high rate. This will require formidable land use intensification through push and pull mechanisms. Tenure security, well-defined property rights and well-functioning property markets are essential for this transformation, in order to stimulate investment in land, diversification and intensification of production, provision of employment opportunities, affordable housing and other social services in rapidly growing urban areas. But the limitation of this study is that

2.5. Summary of literature review

This literature review examined the existing research on the influence of land tenure system on the cotton production among the small-scale farmers, a case study of Kalait Sub-County Tororo District. It aimed to provide a comprehensive summary of the key findings, methodologies, and gaps identified in the literature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the path through which researchers need to conduct their research. Sileyew and Kassu (2020). this chapter focuses on the suggested research design. Study area, population, samples, and sampling methods; data collecting techniques and tools; research process; data quality control, data analysis as well as ethical considerations;

3.2. Research philosophy, approach and design

3.2.1. Research approach

According to Kankam (2020). Research approaches are general techniques that researchers follow when conducting a study. There are three (3) common research approaches and these are qualitative, quantitative, and mixed methods. Because the overall goal is centered on explaining how land tenure system influences cotton production among the small holder farmers in Kalait sub county Tororo district in Uganda, a qualitative research technique was used.

The researcher described the "different meanings that people made about their experiences" in this study, in accordance with Simons (2012), who stated that research using a qualitative technique entails this. Nonetheless, because the results of qualitative research were based on the researcher's subjective opinion, critics claim that it is prejudiced and unscientific (Cohen, Manion & Morrison, 2007). However, this difficulty was frequently ignored as using a small number of instances and going into great depth about them minimized the flaws that were absent

from large samples, making the qualitative method appear to have fewer gaps (Cohen et al., 2007).

3.2.2 Research design

According to Ranganathan, & Aggarwal. (2018), Research study design is a framework, or the set of methods and procedures used to collect and analyze data on variables specified in a particular research problem and According to Saunders, et al. (2012), the definition of research design was a plan aimed at answering a specific research question.. A case study research approach, (Stake, 2010). Detailed accounts of how land tenure system influenced cotton production, the researcher believed that the case study technique was perfect for the research. However, given the 1.5-month of data collection time was too short to examine several issues with a large number of participants, the researcher preferred to do a case study with a smaller number of participants.

3.2.3. Research area

This study was conducted in kalait Sub County, tororo district in eastern region of Uganda the sub county is found about 17 kilometers away from Tororo town of Uganda.

3.3. Study population

There are three (3 population categories for this research i.e. small scale cotton farmers, community leaders, and cotton buyers.

3.3.1. Study cases (size) and selection techniques

The researcher used the purposive sampling which is a non-probability sampling strategy to select a suitable sub-county, parishes, nature of residence, age groups, and sex of people who the researcher intended to collect data from them. According to Creswell (2013), purposive sampling is a technique of sampling whereby a researcher identifies and selects only cases perceived to possess a wealth of experience concerning the phenomena of interest. Samples are also chosen depending on the availability and willingness of participants to give responses (Tongco, 2007). The researchers sampling categories were consisting of the following namely; sub-county, parish, nature of residence, age groups and sex of the people. The researcher purposively selected 1 sub-county i.e. Kalait, all the five (5) parishes, morukebu, angolol, amoni, kodike, kalait in Kalait sub-county; majorly rural based residence; age group that has majority of people up to 64 years old and in terms of sex the researcher selected 16 (8 males and 8 females) with at least 4 (2 males and 2 females) people drawn from each parish. The main reason the researcher selected an equal number of males and females were because there's been a 49% to 51% ratio of (men and women) which was relatively a balanced percentage. Choosing an age group that reaches up to 64 years old was important to the researcher because people who were up to that age are adults and had more experience and we're custodians of cultural practices in their community. Below is the summary of the population, samples, and strategies.

3.3.2. Stratified method of data collection.

In this method of data collection researcher first identified the population of his interest by selecting specific parish and age of the cotton farmer; the researcher divided the population into distinct sub groups based on their relevant characteristics related to land tenure systems for

example type of land tenure, farm size and geographical location. The researcher also ensured that that each stratum was mutually exclusive and collectively exhaustive so that all potential influences were captured. The researcher also determined the sample size for each stratum by deciding the number of participants who participated in the research interview.

3.4.0 Data collection methods and tools

3.4.1. Data collection methods

According to Creswell (2013), data collection is the “process of gathering information on a given issue of interest in a systematic fashion that enables one to answer queries, stated research questions, test hypotheses and evaluate outcomes” (Creswell, 2013). According to Yin (2014) in qualitative research we use data collection techniques that enable a researcher to find answers to a given research question from the participants. There are two categories of data collection methods i.e., quantitative and qualitative methods (Yin, 2014) i.e., quantitative methods help to obtain answers to research questions from respondents, but the answers are assigned certain codes that can be later statistically measured. But qualitative methods help researchers to generate answers from the participants, but their responses are not assigned any codes instead it's recorded in form of text and stories as said primarily by the respondents and later reported by the researcher (Creswell, 2013). According to Yin (2014), the data collection methods are determined by the research philosophy and research approach. So, the researcher used qualitative data collection methods because the research approach was qualitative and based on interpretivist research philosophy as discussed earlier above. The researcher used interview method which was a method of data collection whereby the researcher presented a set of questions about a given issue to the interviewee and then recorded and /or wrote the answers given to him objectively the

way he was given (Yin, 2014). On the interview method there are three (3) types namely unstructured, semi-structured and structured (Creswell, 2013). But, the researcher used unstructured interview because it was less formal, had the least structured questions for asking complex questions like issues about sexuality and reproduction. Unstructured interview is also flexible flow of questions whereby you can skip the order questions when the respondent has no answer at that time or not ready to give the answers at that moment, and allows the researcher to probe the response if it's unclear (Patton, 2002).

The researcher also used a focus group discussion (FDG) method where the researcher was able to put together people with similar characteristics and opinions and tasked them to give their answers and discuss about the issue under study (Cohen, Manion, and Morrison, 2008). Here, the researcher was able to put farmers of similar age groups and sex / gender and land tenure system together so that they were able to discuss freely without any fear of being underage or overaged in the meeting.

3.4.2. Data collection instruments

One of the main stages in a research study is data collection that enables the researcher to find answers to research questions Hamed Taherdoost. (2022) According to Cohen et al. (2007), an instrument of data collection is a tool that carries a set of questions that the researcher uses to present the questions and record answers given or obtained from the respondents. Since the researchers intention was using unstructured interview method and unstructured observation method for data collection, the researcher also designed an unstructured interview guide that had unstructured questions i.e., open-ended questions that gave freedom to the interviewee to give varied answers but also answers to simpler questions and came back to complex ones later

(Patton, 2002, p.199). The researcher made sure that the questions in the guide were clear, straightforward, and sequential in the following order namely, opening questions, introductory questions, transition questions, key questions, ending questions, and final questions (Yin, 2014). Since, the researchers target participants were local farmers, community leaders, the researcher asked the English question in ateso (since the researcher knew how to speak ateso), got answers in ateso and then recorded back in English. But also, the researcher requested for permission to record the interview session because a lot of information were coming from the interviewees that the researcher was not able to capture them. On observation method, the researcher designed an unstructured observation guide because the researcher's desire was to get information or data about the situation that was visible or an event that was occurring or activity that was taking place in a given environment. The researcher requested for permission to take pictures because he was not able to capture, see and recall all the activities that took taking place. Below is the summary of data collection methods and sources of data for each objective of the study and research questions.

Table 3.1: Summary of data collection methods

Research objectives	Data collection methods	Sources of data
identify the land tenure system and issues in kalait sub-county	Unstructured Interview Unstructured observation	Local farmers, local leaders,
Analyze the impact of different land tenure system on	Unstructured	Local farmers,

cotton yield, income and food security of small holder farmers.	Interview Unstructured observation	local leaders and farms
Discuss the possible solutions for addressing the issue of land tenure system on cotton yield, income and food security of small holders' farmers in Kalait Subcounty, Tororo District.	Unstructured Interview	Local farmers, local leaders

3.4.3. Research procedure

After the approval of the research’s proposal, the researcher received a research introduction letter from the department of Agriculture; Faculty of science and education Busitema University, the research supervisor approved the project. In order to describe researchers study, aim and obtain permission to collect data, the researcher also used the letter to introduce himself to the Chief Administrative Officer (CAO) and District agricultural Officer (DAO) of the Tororo District Local Government. The researcher requested for permission from the local council leaders, e.g. LC1, LC2, LC3, along with a description of the objectives, intended audience, and research ethics that the researcher was following. After that, the researcher collaborated with the local leaders to choose farmers and other participants who were fit for the study's criteria, and the researcher planned a meeting time. The researcher went through the study agenda and ethical issues with the participants during the meeting, and the researcher also urged them to sign a consent form to indicate that they were willingly and voluntarily participating in the research the researcher was doing.

Without appropriate research data management (RDM), doing research is like constructing a home without first laying the groundwork Knight, Kanza, and beyond (2022). Your ability to locate, manage, publish, and reuse your data in the future will be shaped by how you arrange and keep it. Knight, Kanza, and Beyond (2022). Stake (2010) argues that in order to fulfill the goals of the study, qualitative research needs to be reliable based on factors like dependability and credibility.

According to Bloomberg & Volpe (2012), triangulating responses by gathering them from various data sources and/or a range of participants is crucial to ensuring the research's credibility. Prolonged participant engagement can also help to ensure that there are no more disparate responses. Here, the researcher made sure to conduct follow-up interviews with participants in order to confirm and cross-check the veracity and authenticity of the data. In order to get data for triangulation, the researcher utilized two distinct methods: focus groups and interviews. For participants, the researcher gathered data from students in three different classes of farmer's e.g. small scale and large scale. This provided for a range of viewpoints on the subject being studied, as highlighted by Bloomberg&Volpe(2012).

Merriam (2009) states that guaranteeing the tracking of the processes and methods used for data collection and interpretation is necessary for dependability. This way, if someone were to follow the same process, the outcomes would be somewhat comparable. Maintaining a record of all the steps the researcher took to conduct the interviews and focus group discussions was how the researcher planned to guarantee reliability. In order to conduct interviews for this study, the researcher first scheduled times with the chosen participants, got to know them, explained the

project to them, and gained their consent. After that, the researcher asked questions and followed up to collect more information about their responses.

3.7. Data Analysis and Presentation

According to Nasir (2023) Data analysis is a useful part of research problems in order to provide data that has meaning as objective answer information. The use of tools in the analysis is largely determined by sharpness and accuracy in drawing conclusions.

According to Creswell (2013) thematic data analysis procedure is appropriate for qualitative studies. Since the research methodology is purely qualitative, the researcher used the process of thematic data analysis suggested by Miles et al. (2014) which begins by organizing and filing the field notes according to categories of respondents. Thereafter, the researcher transcribed the audio-recorded responses into words by listening to them and typing them in Microsoft Word the way they were stated. After that the researcher read through the typed word document to get a general understanding of the whole data collected as the researcher also made some edits on the spellings and formatting of text. The researcher also analyzed this data without any data analysis packages because the researcher was not conversant with them meaning that the researcher manually analyzed the data. The procedures that the researcher followed in data analysis had the following steps namely, getting similar responses from the different participants on a given question under a given specific objective / research questions as suggested by Janesick (2011). Then the researcher assigned codes to represent the similar responses under each research question and then created themes i.e., grouping similar responses under each specific research objective as guided by Miles et al. (2014). The researcher then begun by explaining the meaning of information under each theme and accompanied them with verbatim quotes from the

participants to further explain the given responses much better and show authenticity of the data. Thereafter, the researcher started by discussing the key findings under each research objective by explaining how it either confirms or disagrees with the findings of other research that the researcher had reviewed in the literature review section of this research.

3.8. Ethical considerations

Kaewkungwal, & Adams, (2019). Emphasizes Researchers designing and conducting studies using human data to consider the values and principles of ethical conduct. As suggested by Simons (2012), the researcher used the principle of confidentiality during interviews, which included assuring participants that their answers were used for the purpose of writing this research report and that their real names were not used in the report to protect their identity in the event that any of their answers are not satisfactory. As Michael Nii Laryeafio and Omoruyi Courage Ogbewe(2023) emphasizes, to protect those participants to give their honest view during data collection. As Bloomberg and Volpe (2012) propose, the researcher also requested the interviewees to sign informed permission papers before completing the interview. Yip, Han, & Sng, (2016) says Legal and ethical issues form an important component of modern research, related to the subject and researcher. The main role of human participants in research is to serve as sources of data. Yip, Han, & Sng, (2016). Researchers have a duty to ‘protect the life, health, dignity, integrity, right to self-determination, privacy and confidentiality of personal information of research subjects’. Yip, Han, & Sng, (2016) In the consent form, the researcher provided information about the study's origins, voluntary nature, advantages, and dangers. The researcher also ensured that participants' involvement in this study was voluntary by thoroughly describing the study's aim and objectives and asking them whether they want to participate. As Simons

(2012) emphasizes, the researcher got permission from all of the authorities and participants in this study prior to collecting data.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This chapter presents and discusses both the descriptive and inferential findings from the study. In descriptive statistics, frequency tables were produced to describe the demographic and socioeconomic characteristics of farmers including additional information on the possible aspects that are associated with cotton production and land tenure system. In inferential statistics, bivariate analysis was conducted using three tests such as; chi-square tests, correlations test and the ANOVA tests. The multivariate analysis was conducted using the MANOVA tests.

A total of 8 farmers from Kalait Sub County Tororo District participated in the survey and were interviewed and completed the questionnaires. Descriptive statistics were elicited from each of the questions and inferential statistics were carried out on each of the hypotheses.

4.2 Reliability of data

Reliability of items was tested using Cronbach's alpha coefficient. The Cronbach's alpha coefficient provides a measure of the extent to which each item on the questionnaire was thought of as a mini-test and provided consistent information with regard to respondents' mastery of the domain. In this way, Cronbach's alpha is usually considered as a measure of homogeneity; that is the large alpha values indicate that the items are tapping a common domain (Kazindula. W, 2018).

Reliability test.

Table 4. 1 shows Reliability test.

Cronbach' Alpha	N of items
0.750	3

The Cronbach's alpha coefficient was 0.750. It implied that the 3 items have an acceptable internal consistency. Otherwise the three questions conducted effectiveness of quantities of cotton after harvest. According to the results the sample had an adequate reliability and internal consistency with reference to table 3.1.

4.3 Descriptive analysis of cotton farmers in Kalait Sub County Tororo District.

This chapter gives and discusses the demographic and socio-economic characteristics of the cotton farmers in Kalait Sub County, Tororo district. It as well highlights some possible important aspects affecting cotton production and the form of land tenure system in which it's grown that were considered in the study. The descriptive including mean, standard deviation, the cost of production was found to have the largest mean. Also the mean price per kg of cotton was found to be at 800 implying that each kg of cotton was sold on average at UgX 800. It was also found that the average amount of 800 harvested was 1610.52 kg implying that each farmer harvest 1610.52 kg on average.

4.4. Descriptive summary statistics.

Table 4. 2 shows descriptive summary statistics

Variable	Mean	Standard deviation
Age	34.12	12.381
Period of growing	9.170	10.5093
Land used (acres)	1.8550	1.99878
Amount harvested (kg)	1610.12	1940.43.396
Cost of production	235800.00	33930.706
Proportion sold	1450.50	1930.706
Price per kg	800	

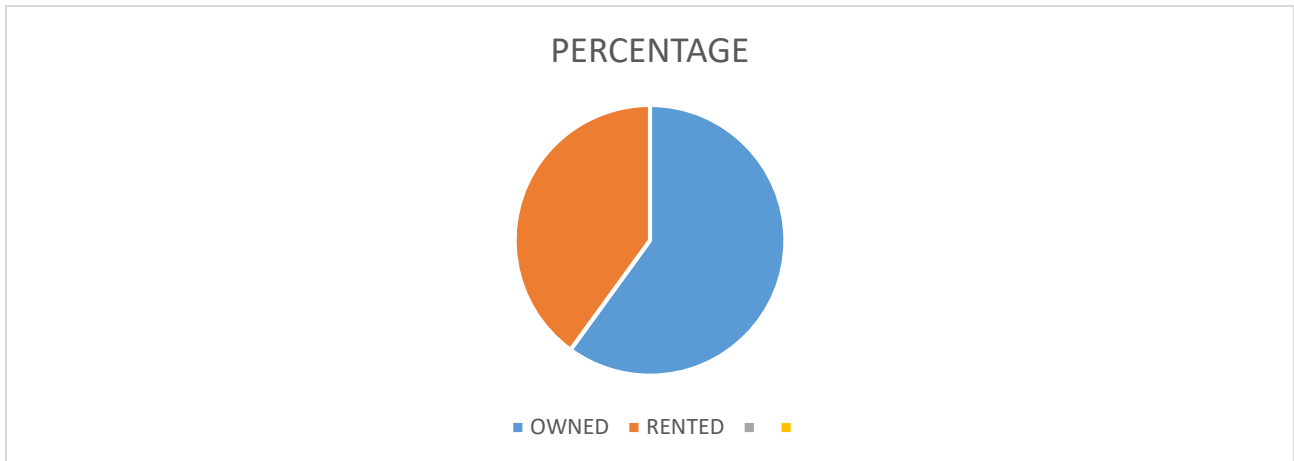
Table 4. 3 shows the distribution of the type of cotton farmers in kalait sub-county tororo district.

TYPE OF FARMER	FREQUENCY	PERCENTAGE (%)
Small scale	40	80
Large scale	10	20
Total	50	100

The biggest percentage (80%, n=40) of the farmers are small scale farmers. (20%, n=10) Of the respondents to the survey are large scale farmers as shown in table 4.3 above.

From the analysis the least proportion of the cotton farmers (40%, n=20) rent land on which they grow cotton for the season whereas the majority of the farmer own their own land individually for which they use for growing their cotton (60%, n=30) as shown in figure 4.3 below.

Figure 4. 1 Percentage distribution of respondents by land tenure system.



The study indicates that majority of the farmers in kalait sub county own land individually i.e. 60% of the of the population and this has influenced the production of cotton positively.

Figure 4. 2 Percentage distribution of respondents by gender

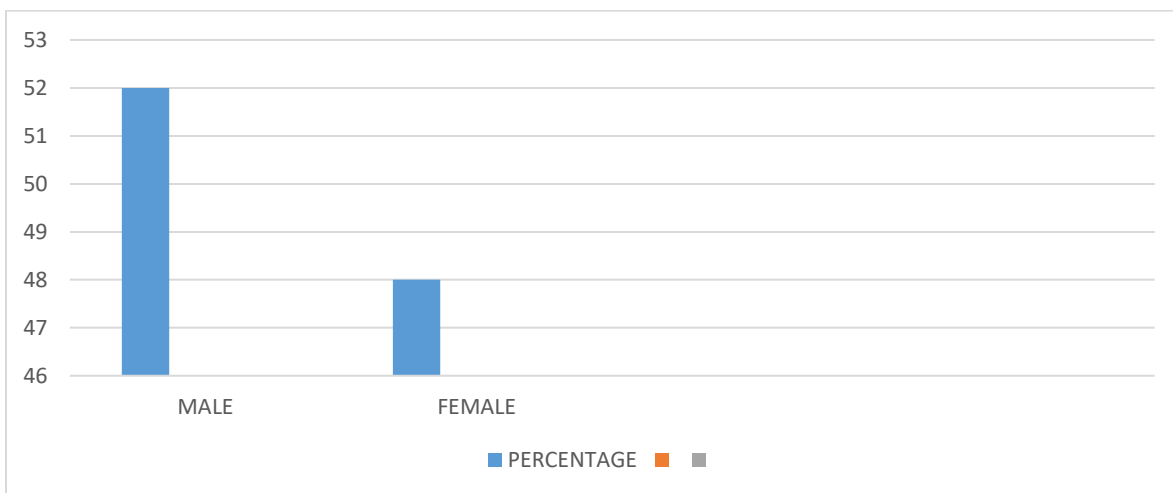
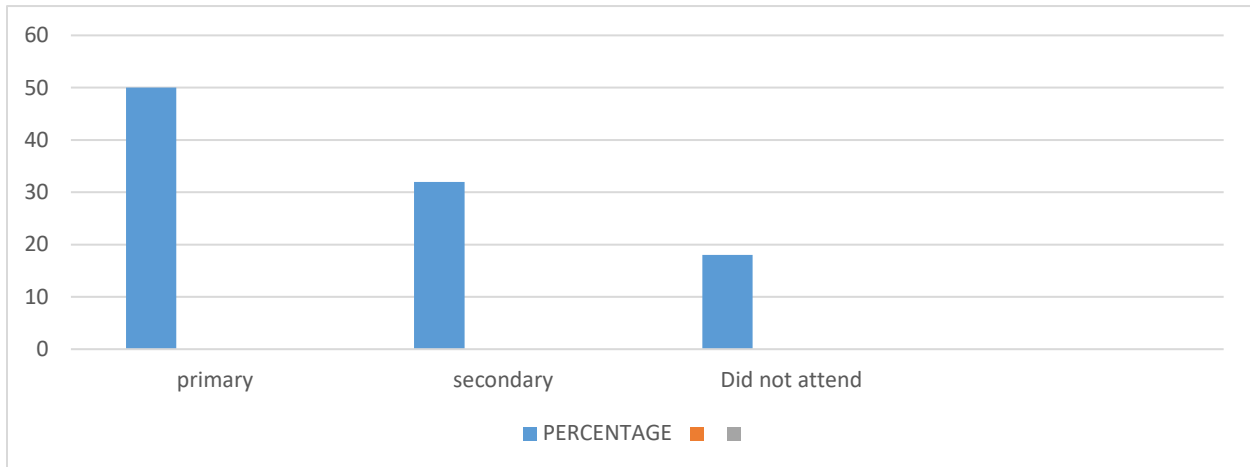


Figure 4.2 shows the respondents distribution by gender. More than half (52%, n=26) of the cotton farmers are males with the 48% (n=24) being females engaged in cotton growing as shown in figure 4.2

Figure 4. 3 Percentage Distribution of respondents according to education level



Majority of the cotton farmers (50%, n=24) attained an education level of primary.(32%,n=17) Of the respondents attained an education level of secondary and the remaining,18% (n=9) of the respondents did not attain education at all as displayed in figure 4.3 above.

Table 4. 4 Distribution of the respondents by next seasons' production

Distribution of the next production	frequency	percentage
Increase	17	34
Reduced	7	18
Maintain	19	38

Stop	5	10
Total	50	100

Majority of the respondents (38% n= 19) said they would maintain the amount of cotton they grow for the coming season that is, they will plant the same amount as they had planted in the previous season whereas 10% (n= 5) of the respondents said they were going to stop growing cotton as shown in table 4.5 above.

4.5. Length of time the respondents have practiced farming.

The researcher sought to establish the length of time the respondents have practiced farming and presented the finding

Table 4. 5 length of growing cotton.

Length limits	Frequency	Percent
Less than 2 years	7	6.8%
Between 2-5 years	24	23.3%
Between 5-10 years	31	30.1%
Over 10 years	41	39.8%

The study indicated that 7(6.8%) had practiced farming for less than 2 years, 24(23.3%) had practiced farming for between 2-5 years, 31(30.1%) had practiced farming for between 5-10 years while 41(39.8%) had practiced farming for over 10 years. The study evidently revealed that

most of the respondents had practiced farming for over 10 years. This could be because they hold enough experience in farming and because this is an activity they are well familiar with.

4.6. Sale of the cotton produces.

The study sought to identify where the farmers sell their cotton produce. The findings are presented in the table form.

Table 4. 6 Sale of the Cotton Produces

Market	Frequency	Percentage
Daily markets	64	62.1%
Wholesalers	24	14.6%
Retailers	10	9.7%
Total	98	

The findings indicated that 64(62.1%) of the farmers in the area sell their produce to Daily markets, 15(14.6%) sell their produce to millers 10(9.7%) % sell theirs to

Wholesalers while 14(13.6%) sell their products to retailers. The findings imply that most farmers prefer selling their produce to Daily markets this could be due to the benefits in terms of Fair price, they gain from them.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATION.

5.1. Introduction.

In this chapter, the researcher synthesizes the findings of the research and provides actionable recommendations based on the insights gained throughout the study. The major findings from the data analysis will be presented first, highlighting key trends, patterns, and implications that emerged during the researcher's investigation. This section aims to encapsulate the essence of the research objectives and how they were met, offering a clear understanding of the outcomes.

5.2. Summary of Major Findings.

Farmers with individually owned land were more likely to invest in high quality seeds, fertilizers and pest control measures. The data indicated that these farmers spent an average of 30% more on inputs than those without secure tenure.

The average yield for farmers with individual land ownership was found to be 1200kg per hectare. While those under communal systems averaged only 800kg per hectare. This disparity highlights the positive correlation between secure land tenure and increased agricultural productivity.

Also the economic analysis revealed that individual land owners earned approximately 40% more from cotton sales than their counterparts operating under communal arrangements. This difference can be attributed to better resource management and ability to make long term investments.

However interviews indicated that farmers felt more secure about investing in their farms when they owned the land outright. Many expressed concerns due to conflicts or changes in community leadership.

5.3. Conclusions.

Basing on the above major findings, the following conclusions were made.

The findings in this study suggest that individual land ownership significantly enhances cotton production among small holder farmers in kalait sub county Tororo District in the eastern region of Uganda. Secure and improved economic outcomes. Conversely communal systems may hinder productivity due to uncertainty regarding rights and lower incentives for investments.

5.4. Recommendations.

In light of the above conclusions, the following recommendations were suggested. That farmers in kalait Sub County own land individually which has limited the production of cotton, the researcher made the following recommendations which can help farmers to enhance their production of cotton.

Encouraging farmers to form cooperatives. This allows them to pool resources together for purchasing seed, fertilizers and equipment's. This collective approach can lead to economies of scale that individual farmers cannot achieve

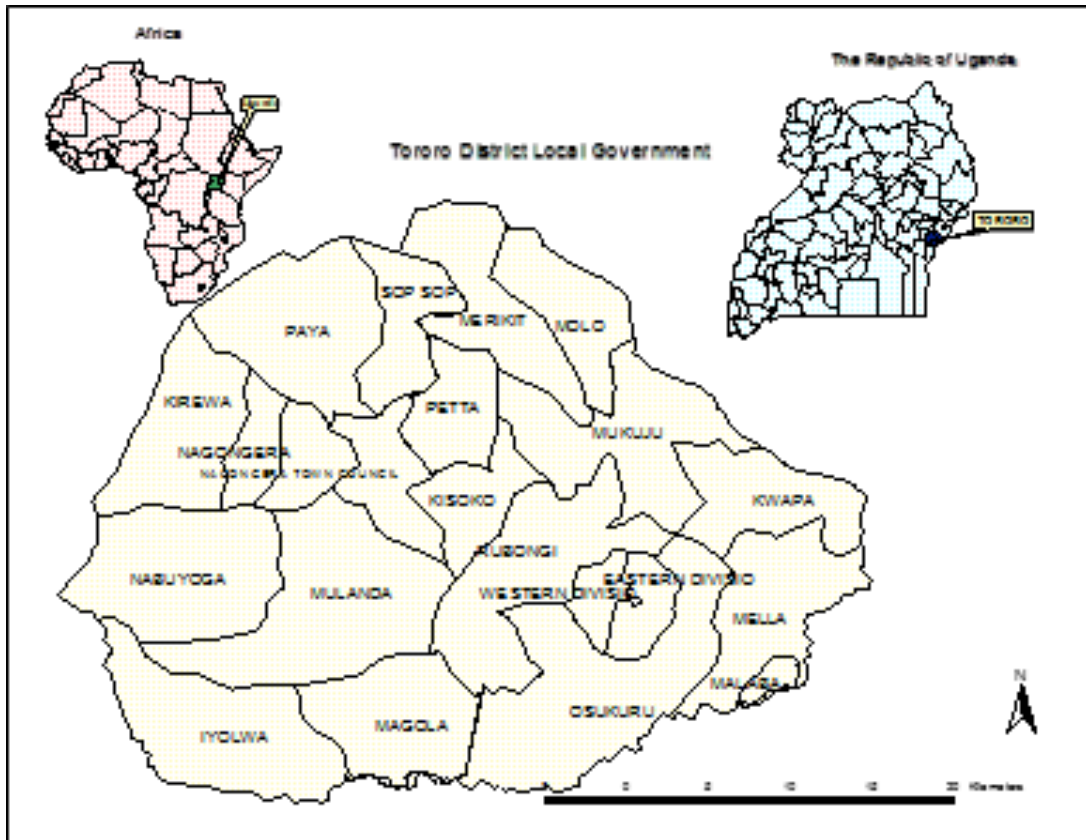
Investment in rural infrastructures such as roads and storage facilities is vital. Improve transport links enable farmers to easily access the market centers for their cotton while proper storage facilities reduce post-harvest losses.

Local government should promote policies that facilitate individual land titling processes to enhance security for small holder farmers

Establishing clear conflict resolution frame works within communities can help minimize disputes over communal lands, thereby improving overall productivity.

APPENDICES

APPENDIX 1: MAP OF TORORO DISTRICT SHOWING THE LOCATION OF KALAIT SUB-COUNTY



APPENDIX 2: RESPONDENTS QUESTIONNAIRE

Dear Respondent,

I am conducting a study on examining the influence of land tenure system on cotton production among the small holder farmers in kalait sub county Tororo district. I am kindly requesting you to spare some time and fill this questionnaire for me as honestly as possible by ticking or filling in the spaces provided. The information provided will be treated strictly as confidential and will only be used for the purpose of this study. The findings of the study and the recommendations arrived at will be of benefit to the cotton farmers of Kalait Sub-County and other cotton producers in Tororo district and the world at large. Please kindly fill this questionnaire for me as honestly as possible by ticking of filling in the spaces provided. The information provided will be treated strictly as confidential and will only be used for the purpose of of this study.

Thank you for your cooperation.

OLIAUNA ELISHA

This questionnaire is made up of four sections A, B and C. Please answer each question by

Writing on the space provided or tick against a box for the choice provided. The information provided is considered strictly confidential and will only be used for the purpose of this research.

SECTION A: GENERAL INFORMATION

Questionnaire number.....

Name of the respondent: -----

Sex 1. Male 2. Female

District.....

Sub-county.....village.....

SECTION B

1. Farmers' household characteristics.

1. Sex of household head 1.female 2. Male

2. Age in years

(a) The household head.....

(b)Spouse.....

3. Marital status

1. Married 3.divorced

2. Single 4. Widowed

4. Where does your spouse (husband or wife) reside?

1. Within village 3. Other village

2. Town/ city 4. Others (specify)

5. What is your current occupation?

1. Farming 3. Teacher
2. Agric officer 4. others (specify).....

6. What is your previous occupation.....?

7. Structure of land ownership

1. Owned 3. Rented out
2. Communal 4. Others (specify).....

8. Education level

What is your education level?

- 1=Not attended any formal education
2=Primary school
3=Secondary school
4=Tertiary education

9. What is your family size?

10. What type of cotton farmer are you?

- Small scale large scale farmer

11. Do you own the land used for farming?

Yes No

SECTION C: QUANTITATIVE QUESTIONS

12. For how long have you been growing cotton?

.....

13. How many acres of land do you use to plant cotton every season?

.....

14. How much cotton do you harvest at the end of the season?

.....

15. What is the total cost of the production for each season?

.....

16. Where Do you sell your harvest?

.....

17. If yes, what proportion do you sell?

.....

19. How much do you sell each kilogram?.....

.....

.....

.....

.....

.....

.....

.....

.....

THANK YOU FOR YOUR COOPERATION

Interviewed

by.....Date:.....

The study focuses on the Influence of land tenure on cotton production in the Kalait sub-county

APPENDIX 3: THE ESTIMATED BUDGET

ITEM	QUANTITY	UNIT COST(Ushs)	Total
Stationary			
Paper for preparation of manuscript	15,000	30,000	
Printing papers	15000	30,000	
Pens	15000	15000	
Pencils	4800	5,000	
Transport		5,000	100,000
Photo copying	lump sum		50,000
Typing / printing	Lump sum		150,000
Binding	4 copies	12000	48,000
Miscellaneous	100,000		100,000

Table 1; the estimated budget to be spent during the research process

APPENDIX 4: LITERATURE REVIEW MATRIX

Theme 1: land tenure system and issues

Author	title	purpose	Methodology	findings	Conclusion./re commendation	Limitations or gap
Chitonge, Harvey, (2021). https://doi.org/10.1007/978-3-030-82852-3_16	Land Tenure Challenges in Africa: Current and Emerging Issues.	highlight the major land governance challenges and the consequences of weak and ineffective land governance systems.	Methodology: qualitative Data collection method: discussions Participants: African	The discussion in this chapter confirms that African countries have not yet found a formula to	We argue that when land is governed efficiently, it can make significant contribution to reducing poverty, inequality, and	purpose: the purpose of this study is to highlight the major land governance challenges and the consequences of weak and ineffective land governance systems whereas the purpose of my study will be examining the influence of land tenure system on the cotton production among

			citizens Place: Africa	address land tenure relations in a way that leads to fair and equitable distribution of land.	economic exclusion.	the small-scale farmers in tororo district, uganda which will not give the same findings
Lisa Murken and Christoph Gornott 2022 https://www.sciencedirect.com/	the importance of different land tenure systems for farmers’ response to climate change: A systematic	The aim of this review was to identify and understand how land tenure systems influence farmers’ ability to	Methodology: review and analysis process. 106 mostly peer- reviewed studies were	The results show that three main interactions link land tenure systems and	Designing smart land tenure interventions based on improved understanding	Methodology: in this study, review and analysis process was used as a method of data collection which did give the clear experiences of farmers but in my study I will use qualitative methodology which will give the

science/article/pii/S2212096322000262	review	withstand climate change and how climate change is operationalized in such studies.	examined using thematic network analysis and a network of interactions between land tenure and climate change in farming contexts is devised as a method of data collection.	climate change with regard to agricultural livelihoods: (i) land tenure characteristics influence farmers' adaptation uptake, type and intensity, (ii) certain tenure	of (local) interactions between land tenure and climate can support farmers in effectively addressing the adverse effects of climate change.	experiences of farmers on land tenure system hence the findings will not be similar
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				settings contribute to vulnerabilit y of different socio- demographi c groups in agricultural systems, e.g. women, migrants and indigenous communitie s, and (iii)		
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				the perception of tenure security itself is affected by climate change.		
Li, Bo, Ruimei Wang, and Quan Lu. 2022. https://doi.org/10.3390/ijerph190101	. "Land Tenure and Cotton Farmers' Land Improvement: Evidence from State-Owned Farms in Xinjiang,	This article develops a dynamic model to examine how land tenure influences farmers' decisions on land improvement. It	Methodology: mixed methodology Data collection methods: Theoretical Analysis, Data	The results reveal that the stability of land tenure in the past will not affect the current	Therefore, in order to make farmers improve the land, we should first consider the establishment	Place: the limitation of this study is that this study was conducted in Xinjiang in China a developed country whereas my study will be conducted in Tororo, Uganda which is a developing country and the findings will not be the same.

17	China"	then analyzes this relationship based on cotton farmers' household-level data from state-owned farms of Xinjiang in China.	and Sample Description, Empirical Specification, and Estimation Strategy Place: Xinjiang in China Participants: farmers	behavior of farmers for they have a relatively stable expectation of current land tenure and a high degree of trust in the government and its policies.	of a market-oriented technology extension system. With the reduction of government administrative intervention, it is necessary for the government to guide the establishment of a top-down technical	
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					<p>service chain for agricultural enterprises, agricultural distributors, and farmers by relying on the innovation of the product service mode of the agricultural enterprises.</p>	
Tom Lavers, 2018	Responding to land-based conflict in					

https://doi.org/10.1093/afraf/ady010	Ethiopia: The land rights of ethnic minorities under federalism, African Affairs					
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Theme 2: impact of different land tenure system on cotton yield, income and food security of small holder farmers.

Ibrahim, H. K., Hendriks, S. L., & Schönfeldt, H. C. (2023). https://doi.org/10.1080/14735903.202	The effect of land tenure across food security outcomes among	This paper examines the association between land tenure and food security among	Methodology: mixed. Data collection methods: integrated surveys on	the findings from these cohabitations in Nigeria are	Future research should revalidate our findings in other African countries'	The limitation of this study is that, this study was conducted in Nigeria where as my study will be conducted in
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3.2220900	<p>smallholder farmers using a flexible conditional difference-in-difference approach. International Journal of Agricultural Sustainability, 21(1).</p>	<p>1434 sampled smallholders from the Nigeria Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) three-round panel dataset.</p>	<p>Agriculture (LSMS-ISA). Place: Nigeria Participants: 1434 sampled smallholders from the Nigeria Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) three-round panel dataset.</p>	<p>novel and will serve as a lesson to other African settings where similar land tenure and agricultural conditions persist.</p>	<p>contexts.</p>	<p>Uganda of which the findings may not be the same</p>
<p>Li B, Wang , Lu</p>	<p>Land Tenure</p>	<p>This article</p>	<p>Methodology:</p>	<p>The results</p>	<p>Therefore, in</p>	<p>Place: the gap in</p>

<p>2021 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8750093/</p>	<p>and Cotton Farmers' Land Improvement: Evidence from State-Owned Farms in Xinjiang, China. Int J Environ Res Public Health.</p>	<p>develops a dynamic model to examine how land tenure influences farmers' decisions on land improvement.</p>	<p>mixed method Data collection methods: Theoretical Analysis and Data and Sample Description Place: State-Owned Farms in Xinjiang, China. Participants: cotton farmers</p>	<p>reveal that the stability of land tenure in the past will not affect the current behavior of farmers for they have a relatively stable expectation of current land tenure</p>	<p>order to make farmers improve the land, we should first consider the establishment of a market-oriented technology extension system.</p>	<p>this study is that, this study was conducted in Owned Farms in Xinjiang, China a developed country but my study will be conducted in Uganda which is a developing country hence the results will not be the same.</p>
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				and a high degree of trust in the government and its policies.		
Oulavanh Keovilignavong and Diana Suhardiman (2020) https://www.sciencedirect.com/science/article/abs/pii/S026483771930242X	Linking land tenure security with food security: Unpacking farm households' perceptions and strategies in the rural	This paper looks at how farm households perceive land tenure (in) security in relation to food (in) security, and how these perceptions	Methodology: Mixed Data collection methods: they designed and developed the methods for case study research following the approaches of	their key findings reveal the close interlinkages between land tenure (in) security and food (in) security	They argue that the first does not automatically result in the latter. In contrast, they show how perceived and de-facto land	this study was conducted in Laos, south east Asia which is a developed country whereas my study will be conducted in Uganda which is a developing country and the findings will

	uplands of Laos.	evolve throughout different policy periods in Laos.	Burawoy (1991) and Yin (1994). While looking at patterns and trends in the way farmers perceive land tenure (in)security and food. Place: Laos. Participants: farmers.	,	tenure insecurity pushes farmers to explore alternative strategies and avenues to ensure food supply, through farm and non-farm employment.	not be the same.
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Theme 3: the possible solutions for addressing the issue of land tenure system on cotton yield, income and food security of small holders farmers in Kalait Subcounty, Tororo District.

Moses Musinguzi, Stig Enemark and Simon Peter Mwesigye (2021 https://www.mdpi.com/2073-445X/10/6/629)	Fit for Purpose Land Administration: Country Implementation Strategy for Addressing Uganda's Land Tenure Security Problems.	This paper reviews three case studies to investigate how lessons learnt from pilot projects informed a FFPLA country implementation strategy.	Methodology: qualitative Data collection methods: document review, field visits and interviews with purposively selected respondents from the pilot sites and institutions that had piloted FFPLA in Uganda Place: Uganda	The study identified that pilot projects are beneficial in highlighting specific gaps in spatial, legal and institutional frameworks, that have potential to constrain FFPLA implementation.	In order to implement a fit for purpose approach for land administration at a national level, it is necessary to consolidate the lessons learnt from pilots into a unified country implementation	Participants: the participants of this study are authors who directly participated, respondents from the pilot sites and institutions that had piloted FFPLA in Uganda but
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			<p>Participants:</p> <p>authors directly participated, respondents from the pilot sites and institutions that had piloted FFPLA in Uganda.</p>		strategy.	<p>my participants will be cotton farmers and local leaders</p>
<p>Holden, S.T. (2020). https://doi.org/10.1007/978-3-030-42148-9_8</p>	<p>Policies for Improved Food Security: The Roles of Land Tenure Policies and Land Markets. In: Gomez y Paloma, S., Riesgo, L., Louhichi, K. (eds) The Role of</p>	<p>Policies for Improved Food Security: The Roles of Land Tenure Policies and Land Markets. In: Gomez y</p>		<p>opulation growth, land degradation, climate change, urban expansion and changing diets are contributing</p>		

	<p>Smallholder Farms in Food and Nutrition Security. Springer, Cham.</p>	<p>Paloma, S., Riesgo, L., Louhichi, K. (eds) The Role of Smallholder Farms in Food and Nutrition Security. Springer, Cham.</p>		<p>to increasing land scarcity and strong demand for land use intensification to meet future food demands. Uncertainties in terms of timing and severity of agroclimatic and other shocks, including social and political</p>		
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				instability, are threatening vulnerable developing economies and their systems of governance.		
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