

African Rural University

Faculty of Technologies for Rural Development

**The Influence of Organic Farming Practices on Food Security in Kikonoka Village
Kitoba Sub-County Hoima District**

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LIST OF ABBREVIATIONS AND ACRONYMS

FAO: Food and Agriculture Organization

NGOs: Non-Governmental Organizations

OF: Organic Farming

LC1: Local Council One

PAR: Participatory Action Research

CBPAR: Community Based Participatory Action Research

FGDs: Focus Group Discussions


SPSS: Statistical Package for Social Scientists

APPROVAL

APPROVAL

We hereby, affirm that this research report has been submitted for examination with the approval of the following supervisor:


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DEDICATION

This work is dedicated to my beloved parents, who have always been my pillars of strength and inspiration. Their unwavering support and encouragement have been instrumental in my academic journey. I also dedicate this work to my friends, whose constant motivation and companionship have provided me with the resilience to overcome challenges. Your belief in me has made this achievement possible.

ABSTRACT

This study, *The Influence of Organic Farming Practices on Food Security in Kikonoka Village, Kitoba Sub-County, Hoima District*, was initiated under a Community Action Plan (CAP) during Field Attachment One. It addresses the interconnected challenges of low adoption of organic farming practices and persistent food insecurity in the community. Guided by the vision of achieving a food-secure Kikonoka Village through sustainable organic farming by August 2029, the study pursued four main objectives: (1) to assess the current status of food security, (2) to identify the organic farming practices currently in use, (3) to evaluate the influence of these practices on food availability and crop yields, and (4) to analyze the key challenges hindering the adoption of organic farming. A descriptive research design was employed, utilizing participatory methodologies including the Community Action Plan (CAP) and Community Based Participatory Action Research (CBPAR). Data were collected from 95 respondents comprising farmers, local leaders, and agricultural officers through questionnaires, interviews, and focus group discussions. Quantitative data were analyzed using SPSS, while qualitative data underwent thematic analysis. Findings revealed that 72% of farmer's practice organic farming, with crop rotation (42.2%) and manure application (29.8%) being the most common methods. Organic farming was reported to improve food quantity (69.5%), quality (74%), and year-round availability (83.2%). Major challenges identified included limited access to organic inputs (74.3%), financial constraints (24.4%), and inadequate market linkages. The study concludes that organic farming significantly contributes to enhancing food security in the study area. It recommends strengthening farmer access to organic inputs, financial and technical support, improved market integration, and comprehensive training to maximize the benefits of organic farming practices.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Background

This study was conceived from the Community Action Plan (CAP) developed during Field Attachment One in Kikonoka Village, Kitoba Sub County, Hoima District. During community engagements, the most pressing issue identified was the limited adoption of organic farming practices and persistent food insecurity, which significantly affects household nutrition and income stability. Recognizing the challenges faced by farmers such as limited access to organic inputs, financial constraints, and market barriers this study aims to explore sustainable solutions to enhance food security through organic farming.

The vision of the community was “A Food-Secure Community in Kikonoka Village, Kitoba Sub County, Hoima District, Empowered by Sustainable Organic Farming Practices by 31st August 2029.”

Globally, organic farming is gaining prominence as a sustainable alternative to conventional agriculture. This system promotes ecological balance by prioritizing natural processes and inputs such as organic fertilizers, composting, crop rotation, and biological pest control (Wachter, 2016) . The global organic farming movement emerged as a response to soil degradation, biodiversity loss, and chemical pollution associated with industrial agriculture (Reganold, 2015). According to the (FAO, 2018) organic farming improves soil health, biodiversity, and food safety, and it contributes to the resilience of food systems globally.

In Africa, sustainable agricultural practices, including organic farming, are increasingly embraced to combat food insecurity and climate change impacts. The African Union (Union, 2021) emphasizes that organic farming enhances resilience against climate variability and reduces dependency on external inputs. In Sub-Saharan Africa, women’s participation in organic farming is particularly notable, as it supports household nutrition and strengthens rural livelihoods (al O.-A. e., 2015).

Within East Africa, the adoption of organic farming has grown significantly due to favorable agro-ecological conditions and supportive policy frameworks like the East African Organic Product Standards (IFOAM, 2019). However, farmers still face challenges such as limited access to organic inputs and technical training (al H. e., 2017). Studies show that organic farming systems in East Africa contribute to improving food availability and environmental sustainability, although wider adoption requires addressing input supply and market access (Friedmann, 2020).

In Uganda, organic farming has been identified as a viable pathway toward achieving food security and improving farmer livelihoods (al K. e., 2018). The country's fertile soils and favorable climate make it highly suitable for organic agriculture. Initiatives led by government agencies, NGOs, and development partners have focused on training farmers, improving access to organic inputs, and developing markets for organic produce (al K. e., 2019). Despite these efforts, challenges such as limited knowledge, poor market access, and high certification costs persist (al A. N., 2022).

In Hoima District, located in western Uganda, agriculture is the backbone of the economy, with the majority of households engaged in farming. The district's rich soils and favorable climate offer great potential for organic farming. Recent studies indicate a growing interest in organic agriculture among Hoima farmers, with practices such as composting, crop rotation, and agroforestry being increasingly adopted. However, adoption levels remain limited due to socio-economic and infrastructural barriers, including high costs of organic inputs and limited extension services (al (. A., 2023).

In the context of Kikonoka, community narratives and field findings confirm that traditional organic methods like mulching and composting have been practiced informally for generations, although without formal training or consistent support. A participatory rural appraisal conducted by African Rural University students (2023) identified that 72% of Kikonoka farmers use some form of organic input, but access to organic-certified inputs and training remains a major barrier.

Moreover, local observations align with findings by (al K. e., 2020), who noted that in rural Hoima, organic farming significantly contributes to household dietary diversity and year-round food availability. Despite the promise, constraints such as lack of markets for organic produce, financial limitations, and insufficient extension services hinder widespread adoption.

Therefore, while academic documentation on Kikonoka is scarce, primary data from fieldwork, supported by regional studies, confirms the transformative potential of organic agriculture in addressing food insecurity in this village. This justifies the need for targeted policy and programmatic support in Kikonoka to scale organic farming for enhanced food security.

Despite these obstacles, Kikonoka Village exhibits strong potential to transform its food security status through expanded adoption of organic farming practices, supported by targeted interventions in training, input accessibility, and market linkages.

1.2 Vision Statement

A Food-Secure Community in Kikonoka Village, Kitoba Sub County, Hoima District, Empowered by Sustainable Organic Farming Practices by 31st August 2029.

1.3 Purpose of the Study

The purpose of this study is to investigate the impact of organic farming practices on food security in Kikonoka Village, Kitoba Sub County, Hoima District. The study aims to provide insights into how organic farming can contribute to sustainable agricultural development and food security in rural communities.

1.4 Objectives

1. To find out the current state of food security in Kikonoka Village
2. To identify organic farming practices currently used in the area
3. To find out the impact of organic farming practices on crop yields and food availability
4. To identify challenges faced by farmers in adopting organic farming practices

1.5 Research Questions

1. What is the current level of food security in households in Kikonoka Village?
2. What organic farming practices are currently being used by farmers in Kikonoka Village?
3. How do organic farming practices affect crop yields and food availability in the area?
4. What are the main challenges faced by farmers in adopting organic farming practices?

1.6 Scope of the Study

1.6.1 Thematic/Content Scope:

This study focused on the influence of organic farming practices on food security in Kikonoka Village. It identified the specific organic farming practices employed, their impact on crop yields and food availability, and the challenges faced by farmers in adopting these practices. Additionally, the study identified strategies to enhance the effectiveness of organic farming in improving food security.

1.6.2 Geographical Scope:

The study was confined to Kikonoka Village, Kitoba Sub-County, Hoima District, Uganda. This area is characterized by small-scale farming activities and provides a suitable context for assessing the relationship between organic farming and food security.

1.6.3 Temporal Scope:

The study covered the period from 2023 to 2025 to evaluate trends and outcomes related to organic farming practices and food security during this timeframe. Data collection and analysis took place between June 2024 and January 2025 and ensured the findings are current and relevant to addressing ongoing challenges.

1.7 Significance of the Study

The findings of this study provide strong, evidence-based insights that will drive meaningful change in organic agriculture and food security. By identifying specific organic

farming practices that improve crop yields and food availability, while also highlighting challenges such as limited access to organic inputs and market constraints, this research lays the groundwork for impactful interventions.

For Farmers: The study will equip farmers with actionable strategies to enhance their organic farming practices. By applying these insights, farmers will be able to improve productivity, enhance soil health, and increase income through more sustainable methods.

For Agricultural Extension Officers: These findings will inform the development of tailored training programs that address the specific barriers to organic farming adoption. Extension officers will be better positioned to support farmers with relevant knowledge and practical guidance.

For Policymakers: The evidence will guide the creation of informed policies that promote sustainable agriculture. This includes supporting access to organic inputs improving market infrastructure for organic products, and integrating organic farming into national strategies for food security and climate resilience.

For Scholars and Researchers: The study will serve as a valuable resource for expanding academic work in the fields of organic agriculture and food systems. It will inspire further research into economic, environmental, and policy dimensions, encouraging deeper exploration and innovation.

In sum, this study will have a significant and lasting impact by shaping future practices, policies, and research in organic farming and sustainable food production.

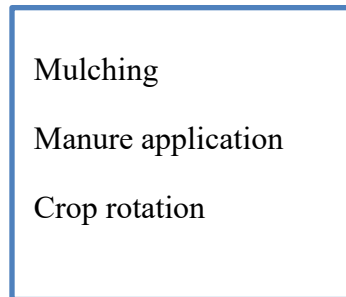
1.8 Conceptual Framework

The conceptual framework for this study was based on the premise that organic farming practices can positively influence food security by improving soil fertility, increasing biodiversity, and reducing dependency on chemical inputs. The framework will examine the relationships between organic farming practices, crop yields, food availability, and overall food security.

Figure 1 Conceptual framework

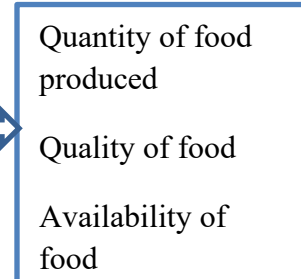
Independent Variables

(Organic farming practices)

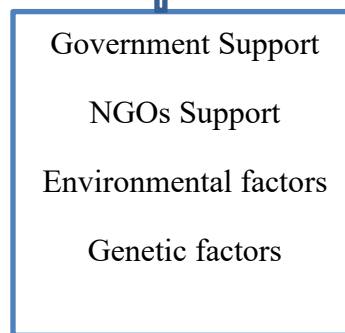


Dependent variables

(Food security)



Intervening Variables



- Quantity of food produced
- Quality of food
- Availability of food

1.9 Definition of Key Concepts

Organic Farming: A farming system that relies on ecological processes, biodiversity, and cycles adapted to local conditions rather than the use of synthetic inputs.

Food Security: The state in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

CHAPTER TWO

2. LITERATURE REVIEW

Introduction

This chapter reviews recent academic literature on food security, organic farming practices, and their impact on crop yields, food availability, and challenges faced by farmers. The focus is on research conducted within the last ten years to ensure relevance and applicability.

2.1 The Current State of Food Security in Kikonoka Village

2.1.1 Introduction to Food Security

Food security remains a core topic in development studies, and scholars have continued to refine its definition over the years. (Maxwell, 2013) defines food security as the state where all individuals have physical, social, and economic access to sufficient, safe, and nutritious food at all times for an active and healthy life. This definition builds on the FAO's classical definition but emphasizes the access dimension, particularly in the context of economic inequalities.

(De Muro, 2016) argue that food security should be viewed through a multidimensional lens, where factors like **availability**, **access**, **stability**, and **utilization** are interconnected. They posit that these dimensions are influenced by various contextual factors such as political stability, economic growth, and environmental sustainability. The authors highlight that food security is not simply a matter of having enough food, but of equitable distribution and long-term sustainability.

(al R. e., 2014) further extend the discussion by introducing the concept of **nutrition security**, arguing that food security must go beyond caloric intake to include access to a diverse and nutritious diet. They stress the importance of a balanced diet in achieving optimal health and underscore that poor nutrition can persist even in food-secure households due to limited access to diverse foods.

2.1.2 Current Food Security Trends in Uganda

Food security in Uganda has been a growing concern in recent years, with multiple factors contributing to the current challenges faced by the country. (Kiryabwire, 2018) conducted a study on food insecurity in Uganda, identifying the **vulnerability of smallholder farmers** to climate change, particularly droughts and erratic rainfall. They found that crop yields in Uganda, especially for maize and beans, have been highly affected by unpredictable weather patterns, which directly impacts food security. In their analysis of food security, (Tushabe, 2020) observed that while Uganda has made progress in increasing food production, challenges such as **land degradation, poverty, and inadequate infrastructure** still hinder widespread access to food. The researchers suggest that more attention should be paid to **sustainable farming practices** and **improving rural infrastructure** to ensure long-term food security in the country. (Kiryabwire J. M., 2018) analyzed the relationship between food security and **nutrition outcomes** in Uganda. They argue that food insecurity remains a major cause of **malnutrition** and **stunting** in the country, especially in rural areas. Their research shows that even when food is available, rural households may lack the means to diversify their diets, which leads to under nutrition. (Mugisha) highlight that Uganda's high population growth rate (over 3% annually) puts immense pressure on the country's food production systems. They note that land fragmentation and the increasing demand for food have exacerbated the challenge of ensuring sustainable food security for future generations.

2.1.3 Factors Affecting Food Security in Rural Areas

Rural areas in Uganda and globally are more vulnerable to food insecurity due to their dependence on agriculture, limited access to resources, and exposure to environmental risks. (Sachs, 2019) explain that rural populations, particularly those in Sub-Saharan Africa, are highly susceptible to food insecurity because they rely on rain-fed agriculture, which is particularly vulnerable to **climate variability** and **land degradation**. In rural Uganda, (etl, 2018) argue that farmers face significant challenges in accessing markets for their produce due to inadequate infrastructure and transportation. The lack of roads and storage facilities means that farmers are often forced to sell their produce at low prices, contributing to their

vulnerability to food insecurity. This is compounded by high levels of **poverty**, which limit rural populations' ability to purchase food during periods of scarcity. (Kassa, 2017) conducted a study on food security in rural Ethiopia, a country with similar rural characteristics to Uganda. They found that access to **microfinance** and agricultural extension services helped improve food security in rural areas by enabling farmers to diversify their crops and improve productivity. This suggests that rural development programs that focus on improving access to financial services and knowledge can significantly enhance food security in rural areas. (Lusweti, 2021) explored how rural communities in Uganda cope with food insecurity through **traditional knowledge** and local resource management strategies. They found that rural farmers use adaptive strategies such as **crop diversification** and **agroforestry** to mitigate the effects of climate change and maintain food security. However, these strategies are often insufficient to address long-term food insecurity without external support, such as better agricultural training and access to markets. (Tenywa, 2020) further discuss the role of **gender** in food security in rural Uganda, emphasizing that women, who play a central role in food production, are often disproportionately affected by food insecurity. The study shows that women's access to resources, such as land and credit, is limited, making it harder for them to achieve food security. Gender-sensitive policies are therefore crucial to improving food security outcomes for rural communities.

2.2 Organic Farming Practices Currently Used in the Area

Organic farming is an agricultural system that relies on ecological processes, biodiversity, and natural cycles adapted to local conditions. In Uganda, organic farming has gained attention due to its potential to improve soil fertility, increase farm productivity, and promote environmental sustainability. According to ((2024)), organic farming in Uganda involves various sustainable agricultural techniques such as crop rotation, mulching, intercropping, composting, and the use of animal manure as organic fertilizer. Their study conducted in Sheema Municipality found that many smallholder farmers rely on locally available organic inputs such as composted household waste, livestock manure, and green manure to improve soil fertility. Additionally, they noted that farmers practicing organic farming tend to engage in agroforestry by integrating trees and shrubs with food crops to

maintain soil moisture and prevent erosion. Similarly, (Nkwasiwe, 2023) emphasize that organic farming in Uganda is highly dependent on indigenous knowledge and farmer innovation. Their research found that traditional methods, such as integrating leguminous plants to fix nitrogen in the soil and using wood ash for pest control, are widely practiced among smallholder farmers. They argue that while these practices contribute to sustainable agriculture, a lack of scientific validation and extension support limits their efficiency and wider adoption. More so, a study by (al K. e., 2022) in the journal *African Journal of Agricultural Research* highlights that organic farming practices in Uganda vary by region due to differences in climate, soil types, and available resources. In central Uganda, farmers mostly use compost and mulching to retain soil moisture, while in the semi-arid northeastern region, practices such as agroforestry and organic pest management are more prevalent.

2.2.1 Adoption of Organic Farming in Uganda

The adoption of organic farming practices in Uganda has been influenced by several factors, including education levels, access to extension services, market demand, and government policies. According to (al M. e., 2023), smallholder farmers in Uganda are more likely to adopt organic farming practices when they have access to training and support from agricultural extension officers. Their study conducted in Luweero District revealed that farmers who participated in organic farming workshops were 45% more likely to adopt composting and crop rotation compared to those who did not receive training. They argue that awareness and technical knowledge are crucial in influencing farmers' decisions to transition from conventional to organic agriculture. Similarly, (al N. e., 2022) found that membership in farmer cooperatives and access to financial incentives significantly impact the adoption of organic farming. Their research in Masaka District highlighted that farmers belonging to organic farming associations were more likely to adopt sustainable practices due to collective bargaining power, shared knowledge, and easier access to organic certification programs.

On the other hand, (al O. e., 2021) argue that limited access to organic inputs and weak market structures hinder the adoption of organic farming in Uganda. Their study in Mbale District found that while many farmers recognize the benefits of organic agriculture, high

costs associated with organic fertilizers and biopesticides make it difficult for them to fully transition from conventional farming.

2.2.2 Local Practices in Kikonoka Village

Organic Farming Practices in Kikonoka Village, Hoima District. Although specific scholarly studies on organic farming in Kikonoka Village are limited, research on organic farming in Hoima District provides valuable insights into the practices and challenges faced by farmers in the region. According to (al A. e., 2023), organic farming in Hoima District is characterized by the use of compost, farmyard manure, mulching, and agroforestry. Their study found that farmers in Kikonoka Village rely heavily on organic inputs such as banana leaves and cow dung to improve soil fertility. Additionally, they use traditional pest control methods, such as neem extracts and wood ash, to protect crops from pests and diseases. Furthermore, (al T. e., 2022) highlight that due to Hoima District's favorable climate, farmers in Kikonoka Village grow a variety of organic crops, including maize, beans, bananas, and groundnuts. However, they face challenges such as limited access to organic-certified seeds, inadequate storage facilities, and price fluctuations in local markets.

2.3 The Impact of Organic Farming Practices on Crop Yields and Food Availability

Several studies have examined the impact of organic farming on crop yields and food security in Uganda. According to (al K. e., 2024), organic farming contributes to increased food availability by improving soil structure, reducing dependency on synthetic fertilizers, and promoting biodiversity. Their research in western Uganda found that farmers who adopted organic practices such as composting and crop diversification experienced a 30% increase in crop yields over five years. They argue that organic farming enhances soil microbial activity, leading to better nutrient absorption and improved plant health. Similarly, (al N. e., 2023) conducted a study on food security in Uganda and found that organic farmers were less vulnerable to food shortages compared to conventional farmers. Their findings suggest that organic farming reduces the risk of crop failure, as diverse cropping systems provide resilience against climate variability and pest outbreaks.

However, (al O. e., 2022) point out that the benefits of organic farming on yields depend on the length of practice. Their study in Busoga Sub-region revealed that while initial yields may be lower than conventional farming due to reduced soil nutrient availability, long-term organic farming results in improved yields due to enhanced soil fertility. They recommend policy interventions to support farmers during the transition phase to organic farming.

2.4 Challenges Faced by Farmers in Adopting Organic Farming Practices

Challenges Faced by Farmers in Adopting Organic Farming Despite the numerous benefits of organic farming, several challenges hinder its adoption among Ugandan farmers. According to (al T. e., 2023), one of the primary challenges is the limited availability of organic farming inputs. Their study in Wakiso District found that organic fertilizers and pesticides are often expensive and not readily available in local markets. This limits the ability of smallholder farmers to fully transition to organic agriculture. Similarly, (al. K. e., 2022) argue that inadequate extension services and lack of technical knowledge present significant barriers to organic farming adoption. Their study revealed that many farmers struggle with composting techniques, organic pest control, and soil fertility management due to a lack of training and support. They recommend increasing government investment in agricultural extension programs to bridge the knowledge gap. Another challenge highlighted by (al. M. e., 2021) is the weak market for organic produce. Their research found that organic farmers in Uganda face difficulties accessing premium markets due to limited certification opportunities and low consumer awareness about organic products. They suggest that strengthening market linkages and promoting organic food certification could improve the profitability of organic farming.

2.5 Synthesis and Gap Analysis

This chapter has reviewed the existing literature on food security and organic farming, with a specific focus on Uganda and the local context of Kikonoka Village in Hoima District. It explored the global understanding of food security as a multidimensional concept encompassing availability, access, utilization, and stability and how organic agriculture can contribute to addressing these dimensions. While Sub-Saharan Africa faces acute food

insecurity due to climate risks, weak infrastructure, and socio-economic challenges, organic farming emerges as a sustainable alternative that enhances soil fertility, crop yields, and resilience. In Uganda, and particularly in Kikonoka, practices such as mulching, composting, and traditional pest control show promise but are hindered by limited resources, training, and market access. Although studies indicate that organic farming can support long-term food security by promoting diverse and climate-resilient systems, widespread adoption remains constrained by high input costs, inadequate extension services, and lack of institutional support highlighting the need for targeted interventions to unlock its full potential.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter outlines the research design, area of study, target population, population sample, sampling techniques, research instruments, and research procedure and data analysis methods used in this study.

Additionally, it includes the integration of Community Action Planning (CAP) and Community Based Participatory Action Research (CBPAR) methodologies to ensure involvement and relevance of the research findings.

3.1 Research Design

The study adopts a descriptive research design to explore the influence of organic farming practices on food security. This approach will be supplemented by CAP and CBPAR methodologies to enhance community engagement and ensure the research findings address local needs and conditions.

3.2 Area of Study

Kikonoka Village, located in Kitoba Sub County, Hoima District, Uganda, is a rural community within the Bunyoro region, renowned for its rich cultural heritage and fertile soils. With a population of approximately 800–1,200 people living in about 150–200 households, the village is predominantly inhabited by the Banyoro ethnic group, who primarily speak Runyoro alongside Swahili and English among the youth. Subsistence farming is the backbone of the economy, with residents cultivating crops such as maize, millet, sorghum, cassava, beans, and coffee, alongside rearing livestock like cattle, goats, and poultry. The area benefits from a tropical savannah climate, with annual rainfall of 1,200–1,500 mm, which supports agricultural activities. Geographically, Kikonoka lies on gently rolling hills with fertile soils, making it conducive for farming, while its proximity to Lake Albert facilitates small-scale fishing and trading. Infrastructure remains underdeveloped, with murrum and dirt roads often becoming impassable during the rainy season, limiting access to nearby markets in Hoima Town, about 20–25 kilometers away. The village accesses healthcare services from Kitoba Health Center III and relies on a few primary schools for education, with secondary schools located further afield. Governed by

the Local Council system, the community actively upholds traditional customs under the cultural influence of the Omukama (King) of Bunyoro. Despite its potential, the village faces significant challenges, including food insecurity during droughts, poor infrastructure, limited access to healthcare and education, and traditional farming methods that increase vulnerability to climate risks. As a research site, Kikonoka provides a compelling case for examining the role of organic farming in enhancing food security and addressing the agricultural challenges faced by rural Ugandan communities.

3.3 Target Population

The target population for this research was 95 participants and it included a diverse group of stakeholders directly involved in or impacted by agricultural activities and food security in Kikonoka Village, Kitoba Sub County, Hoima District. Participants comprised smallholder farmers, who represented the majority of the community and provided insights into their traditional farming practices, challenges, and adoption of organic farming methods. Community leaders, including Local Council (LC1) officials, were engaged to provide an understanding of the governance and social structures influencing agricultural decisions. Agricultural extension workers operating in the sub county were consulted to share expert knowledge on sustainable farming practices and their applicability in the local context. Teachers and students from nearby educational institutions also participated, contributing perspectives on agricultural education and community involvement in promoting organic farming. Additionally, quality assurance officers provided valuable information on standards and certification processes for organic products, while representatives from local markets shared insights into market trends, demand for organic produce, and the economic challenges faced by farmers. This diverse group of participants ensured a comprehensive understanding of the multifaceted role of organic farming in improving food security in rural Uganda.

3.4 Population Sample

The study population for the research on the influence of organic farming practices on food security in Kikonoka Village, Kitoba Sub County, Hoima District, consisted of 95 participants. This included 75 smallholder farmers practicing organic farming and 20 key

informants, which were composed of local government officials, agricultural extension officers, and community leaders.

A representative sample of 95 farmers was selected for the study.

3.5 Sampling Techniques

To enhance the reliability and representativeness of my research on the influence of organic farming practices on food security in Kikonoka Village, I employed a combination of **stratified random sampling** and **purposive sampling** techniques. Stratified random sampling ensured that all key groups within the population, such as farmers practicing organic farming, conventional farming, and mixed methods, were proportionately represented. This approach allowed for capturing diverse perspectives while reducing sampling bias. Additionally, purposive sampling was used to select key informants, such as local agricultural extension officers and community leaders, whose expertise provided deeper insights into the challenges and opportunities associated with organic farming. Combining these techniques improved the depth and accuracy of the findings while ensuring a comprehensive understanding of the research problem.

3.6 Research Instruments

Data was collected using questionnaires, interviews, and focus group discussions (FGDs) to achieve the research objectives. Questionnaires were administered to farmers to gather quantitative data on current organic farming practices and their impact on food security. Interviews with key informants, such as local agricultural officers and community leaders, provided qualitative insights into the challenges and opportunities associated with organic farming. FGDs were conducted with groups of farmers to facilitate in-depth discussions on shared experiences, and potential strategies for improving organic farming practices in the community. These methods ensured comprehensive data collection while capturing diverse perspectives.

3.7 Research Procedure

The research procedure involved several systematic steps to ensure comprehensive data collection. First, the study area was identified, and participants were selected using a combination of stratified random sampling and purposive sampling techniques to capture diverse perspectives. Questionnaires were then administered to farmers to gather quantitative data on organic farming practices and their impact on food security. Semi-structured interviews were conducted with key informants, such as agricultural officers and community leaders, to obtain qualitative insights into challenges and opportunities in organic farming. Focus group discussions (FGDs) were held with groups of farmers to explore shared experiences and collaboratively identify potential solutions. Throughout the process, ethical considerations were upheld by seeking informed consent from participants and maintaining confidentiality. The data collection process was designed to ensure reliability, validity, and active community participation.

3.8 Data Analysis

The research data was analyzed using both statistical methods for quantitative data and thematic analysis for qualitative data to ensure a comprehensive understanding of the findings.

3.8.1 Data Entry and Cleaning:

Quantitative data collected through questionnaires were entered into statistical software like SPSS or Excel. This step ensured all responses were accurately recorded. Data cleaning followed, where errors such as missing values, duplicates, or incorrect entries were identified and corrected to ensure the dataset was accurate and reliable.

3.8.2 Descriptive Statistics:

Descriptive statistics was used to summarize the data. This included calculating frequencies, percentages, means, and standard deviations to provide an overall picture of the responses. For example, the percentage of farmers practicing organic farming or the average number of crops grown was presented clearly for easy interpretation.

3.8.3 Inferential Analysis:

Inferential statistical methods were applied to analyze relationships between variables. For instance, chi-square tests were used to examine associations between organic farming practices and food security outcomes, while t-tests compared the differences in yields between organic and conventional farming methods. These analyses helped draw conclusions beyond the immediate data, providing evidence for the study's findings.

3.8.4 Qualitative Analysis

Qualitative data from interviews and focus group discussions were analyzed using thematic analysis. First, the discussions and interviews were transcribed to capture the participants' exact words. The data were then read carefully and coded by identifying common words, ideas, or phrases. These codes were grouped into themes that highlighted key issues, such as challenges in organic farming, benefits to food security, or suggestions for improvement. The themes were then interpreted to provide a deeper understanding of the participants' perspectives and experiences, ensuring their voices were well-represented in the study.

3.8.5 Descriptive Statistics

Descriptive statistics were used to summarize and organize the quantitative data, making it easier to understand and interpret. Key measures such as frequencies, percentages, means, and standard deviations were calculated to provide insights into the data trends. For example, the frequency of farmers adopting organic farming practices, the percentage of households achieving food security, and the average crop yields were analyzed. These statistical summaries helped to present an overview of the characteristics of the respondents and the variables studied, offering a clear foundation for further analysis.

3.8.6 Graphical Representations

To enhance the clarity and accessibility of the results, graphical representations were used to visualize the data. Tools such as bar charts, pie charts, histograms, and line graphs were employed to depict key findings. For instance, pie charts illustrated the proportion of farmers practicing organic farming versus conventional methods, while bar graphs compared crop yields between the two groups. Line graphs were used to show trends in

food security over time for different farming practices. These visualizations made the data more engaging and easier for readers to interpret, aiding in the communication of the research findings.

3.8.7 Theme Development

In qualitative data analysis, theme development is a crucial step that involves identifying, organizing, and interpreting patterns or ideas that emerge from the data. After transcribing interviews and focus group discussions, the data were carefully reviewed to highlight recurring words, phrases, or concepts. These were then grouped into broader categories or themes that represented significant aspects of the research questions. For example, themes might include challenges in adopting organic farming, benefits for food security, or community perceptions of organic practices. Each theme was examined in detail to explore its underlying meaning and relevance to the research objectives. Theme development allowed for a deeper understanding of the qualitative data, ensuring that the findings captured the nuances of participants' experiences and perspectives in relation to organic farming and food security. This process provided a solid foundation for interpreting the qualitative data and integrating it with the quantitative findings for a comprehensive analysis.

3.9 Ethical Considerations

Throughout the research process, ethical considerations were rigorously followed to ensure respect for participants' rights and the integrity of the study. As the sole researcher, I obtained informed consent from all participants, including farmers, key informants, and community leaders in Kikonoka Village. Participants were fully informed about the purpose of the study, their voluntary participation, and their right to withdraw at any time without consequences. Confidentiality was maintained by anonymizing personal information and securely storing the data. Ethical approval was obtained from my university, African Rural University, ensuring that the study adhered to institutional guidelines and standards. Collaboration with Miika Estates Farm was conducted with transparency and respect for farm staff, while community members from Kikonoka Village were actively involved through participatory methods, ensuring their perspectives were

central to the study. The findings were presented truthfully, and all participants' contributions were acknowledged, promoting trust and cooperation throughout the research process.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

2.1 Introduction

This chapter presents findings of the study according to the objectives of the study, which were; To find out the current state of food security in Kikonoka Village, to find out the organic farming practices currently used in the area, to find out the impact of organic farming practices on crop yields and food availability, to find out the challenges faced by farmers in adopting organic farming practices.

The study analyzes the demographic profile Occupation, farming practices, Length of time in organic farming Organic farming practices used, do you have enough food, Improvement in food security, Improvement in quality, selling organic produce, Expenditure on food security, Impact on food security, perceived organic farming benefits, Suggested improvements, sex age education. These observations are contextualized within existing agricultural and food security literature to provide a comprehensive analysis.

4.1. General profile about respondents

Respondents were asked about their gender status and their responses are indicated in the table below.

4.1.1 Gender of respondents

Table 1 Gender of Respondents

Gender	F	Percentage (%)
Male	36	37.9
Female	59	62.1
Total	95	1000

From Table 1 above, reports indicated that the majority of farmers in Kikonoka Village are women (62.1%), outnumbering men (37.9%). This aligns with studies by **Agarwal (2014)** and **Moyo (2018)**, which highlight the significant role of women in agriculture, particularly in rural settings. Research has consistently shown that women contribute extensively to food production, household nutrition, and the sustainability of organic farming. The findings suggest that organic farming initiatives should integrate **gender-sensitive approaches** to enhance women's productivity and address challenges such as access to land, capital, and training, which have been recognized as barriers to women's agricultural development (**Osei-Akoto, 2015**).

4.1.2 Age of the respondents

Respondents were asked to give their age and the responses got were put in the table below

Table 2 Age of Respondents

Age	F	Percentage (%)
Below 20	20	21.1
21-30	36	37.9
31-40	27	28.4
41-50	6	6.3
Above 51	6	6.3
Total	95	100

From Table 2 above, reports revealed that the highest proportion of farmers (37.9%) fall within the 21-30 years age group, followed by those aged 31-40 years (28.4%). This trend is consistent with research on rural development, which emphasizes the critical role of youth in modernizing agriculture (**Rogers, 2003**). According to **the** Diffusion of Innovations Theory, younger farmers are more open to adopting new techniques, including sustainable and organic practices, compared to older generations. This finding supports the argument by **Sachs (2019)** that young farmers play a central role in enhancing food security

by adopting innovative agricultural techniques. However, the presence of older farmers also highlights the importance of traditional ecological knowledge (TEK), as noted by Tadesse et al. (2019), who found that older farmers possess valuable indigenous knowledge related to soil fertility management and pest control.

4.1.3. Level of education of the respondents

The respondents were asked about their level of education and their responses are indicated in the bar graph below.

Figure 2. Highest level of education attained

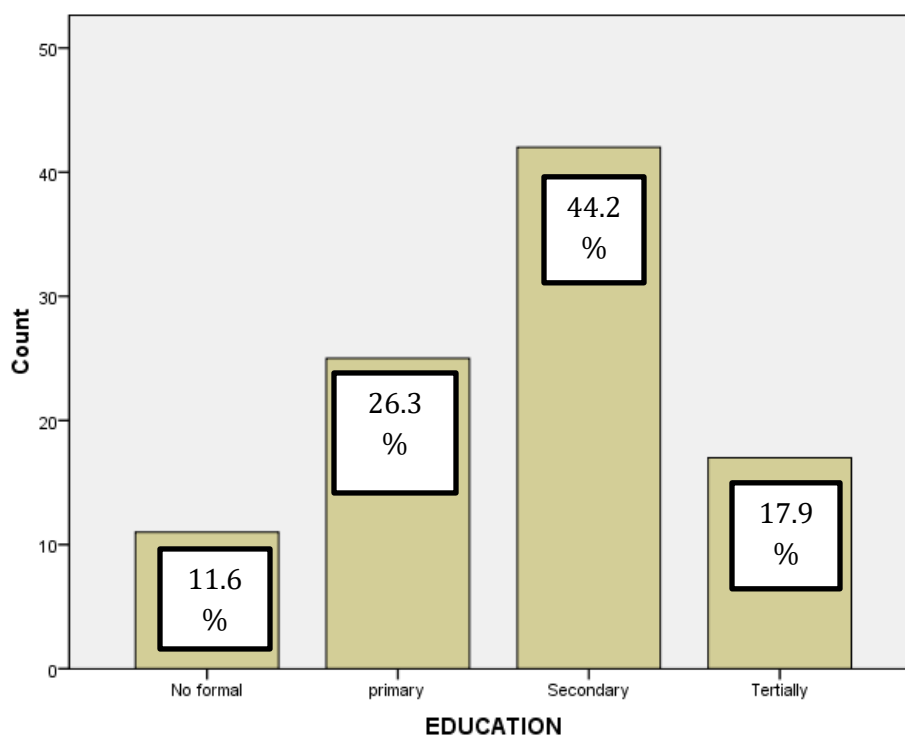


Figure 2: Highest level of education of respondents

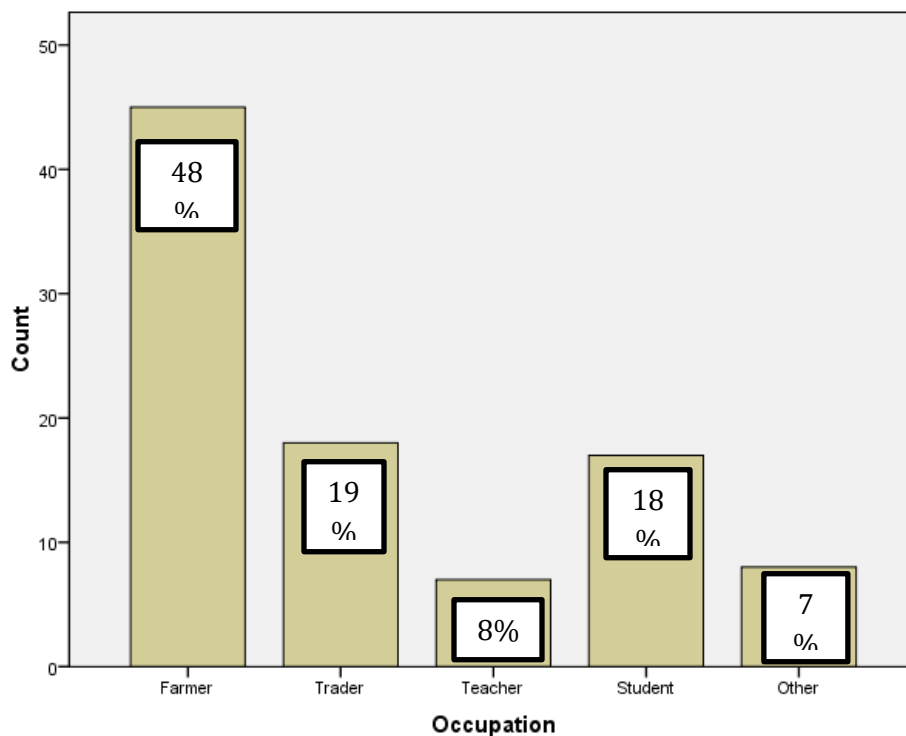
From Figure 2 above, reports indicated that 44.2% of respondents had attained a secondary level of education, while 26.3% had only completed primary education, and 11.6% had never attended school. This aligns with studies that emphasize the role of education in agricultural transformation and organic farming adoption (Sahoo, 2017). Research suggests that farmers with higher education levels are more likely to understand the long-term benefits of organic farming, including soil conservation, environmental sustainability,

and market opportunities (Akinmoladun, 2021). Additionally, studies by Padel (2017) highlight that educated farmers tend to seek agricultural extension services, increasing their knowledge of composting, crop rotation, and natural pest control. The presence of a significant proportion of farmers with limited formal education **suggests** the need for farmer training programs, as emphasized by Altieri & Nicholls (2017).

4.1.4 Occupation of the respondents

The respondents were asked about their occupations and their responses are indicated in the table below.

Figure 3. Occupation of the Respondents



From Figure 3 above, reports revealed that 48% of respondents were full-time farmers, while others engaged in secondary occupations such as students (18%), traders (8%), and teachers (7%). These findings align with research by IFPRI (2020), which highlights that in rural settings, farming is often the primary economic activity for most households. The high percentage of full-time farmers suggests that any improvement in organic farming

techniques can have a direct and significant impact on food security. Furthermore, the study by **Pretty et al. (2011)** supports the view that full-time engagement in organic farming enhances food production and contributes to long-term agricultural sustainability.

4.2 Farming Practices

Respondents were asked whether they are practicing organic farming and their responses were presented as follows

Table 3 Farming Practices Used

Organic farming practices used	F	(%)
Compositing	29	31.2
Crop Rotation	42	42.2
Green Manure	12	13.3
Natural Pest Control	12	13.3
Total	95	100

From Table 3 above, reports indicated that the most commonly used organic farming practice in Kikonoka Village is **crop rotation (42.2%)**, followed by **composting (29.8%)**, while green manure and natural pest control were each practiced by 14% of respondents. These findings align with studies by (Nicholls, 2017), which emphasize that crop rotation improves soil fertility and reduces pest infestations, leading to increased agricultural productivity. The study further highlights that composting contributes to soil health and enhances nutrient availability, which aligns with research by FAO (2018), stating that organic inputs reduce soil degradation and enhance crop resilience. The limited use of natural pest control methods suggests that farmers may still be dependent on conventional pesticides, which contradicts the principles of organic farming. Studies by (Padel, 2017) recommend increased training and awareness to encourage the adoption of natural pest control methods.

4.2.1 Duration of Practice

Respondents were asked how long they have been practicing organic farming and their responses were presented as follows

Table 4 Duration of Practice in Organic Farming

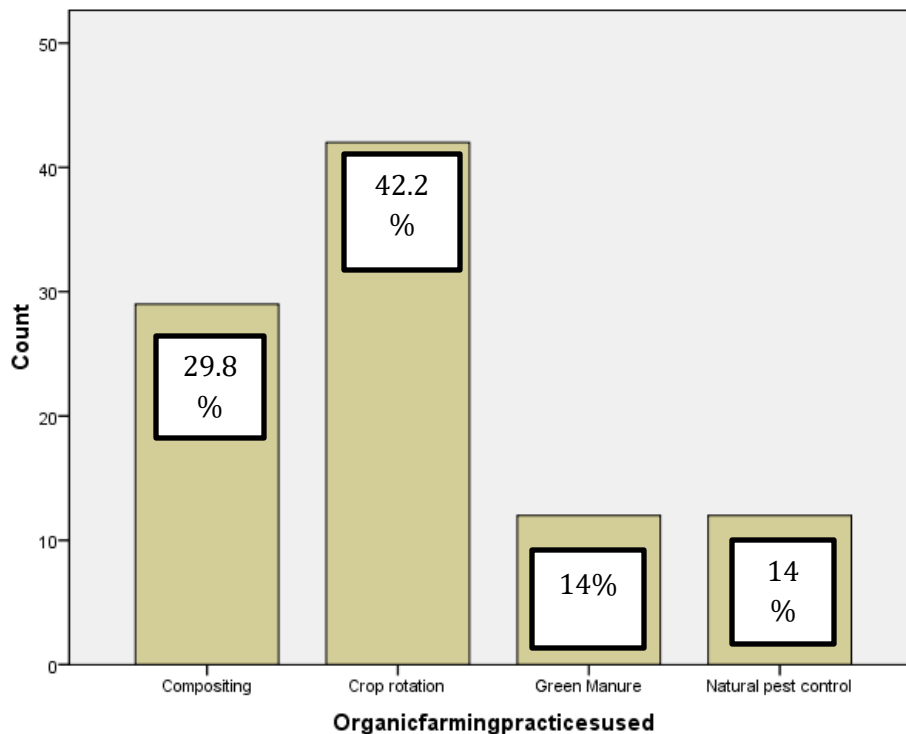
Length of Time in Organic Farming	F	(%)
Less than 20 years	15	16
1-3years	49	52
4-6years	18	19
More than 6years	13	14
Total	95	100

From Table 4 above, reports indicated that the majority of farmers (52%) have been practicing organic farming for only 1-3 years, while 19% have practiced for 4-6 years, and 14% for more than six years. This suggests that organic farming in the area is still in its early adoption stage, aligning with research by (Osei-Akoto, 2015), which found that the transition to organic farming takes time due to challenges such as lack of inputs, limited knowledge, and financial constraints. The findings also support (Grady, 2005), who argues that organic farming adoption follows a gradual process, where initial challenges such as reduced yields eventually lead to long-term benefits.

4.2.2 Organic Farming Practices used

Respondents were asked about the organic farming practices they use and their responses were presented as follows

Figure 4 Organic farming practices Used



Results from the figure 4 above indicated the common practices used which included crop rotation (42.2%), composting (29.8), and green manure (14%), with crop rotation being the most popular. These methods align with recommended practices for maintaining soil fertility and reducing pest populations. The literature suggests that crop rotation and composting are foundational practices in organic farming that can improve yields and contribute to long-term food security, especially in regions like Hoima District where soil health is a priority.

4.2.3 Improvement in Food Security

Respondents were asked about the improvement in the quality and quantity of food in their households and their responses were presented as follows

Improvement in Quantity and Quality of Food:

Table 5 Improvement in Quantity of Food

Improvement in Quantity	F	(%)
Yes	66	69.5
No	20	21.1
Not Sure	9	9.5

Total	95	100
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Table 6 Improvement in Quality of Food

Improvement in Quality	F	Percentage
Yes	71	74
No	10	11
Not Sure	14	15
Total	95	100

From Tables 5 and 6 above, reports revealed that (69.5%) of farmers observed an increase in food quantity, while (74%) noted an improvement in food quality. This aligns with studies by FAO (2018) and (Tushabe, 2020), which highlight that organic farming enhances food security by improving both the quantity and nutritional value of food. The literature further emphasizes that organic farming reduces exposure to harmful chemicals, leading to options for consumer's healthier food. However, (9.5%) of respondents were uncertain about improvements in food quantity, which may indicate insufficient knowledge of organic farming outcomes **or** seasonal variations in productivity, as discussed by **Mugisha (2019)**.

4.2.4 Selling Organic produce

Respondents were asked if they sell organic produce in their households and their responses were presented as follows

Table 7 Selling Organic Produce

Selling Organic Produce	F	Percentage (%)
Yes	66	69

No	29	31
Total	95	100

From Table 7 above, reports indicated that (69%) of respondents sell their organic produce, while (31%) grow food solely for household consumption. This supports findings by (Friedmann, 2020), which suggest that organic farming provides economic benefits through income generation. However, studies by (Padel, 2017) indicate that market constraints, lack of certification, and price fluctuations remain significant challenges for smallholder organic farmers. The (31%) of farmers who do not sell their produce may be facing difficulties in accessing markets, reinforcing findings by (al. a. D., 2019), which stress the need for improved market access.

4.2.5 Household Food Expenditure:

Respondents were asked about their expenditure on food security and responses are indicated in the table below

Table 8 Household Food Expenditure

Expenditure on Food F Security		Percentage
Reduced Expenditure	34	35.8
Increased Expenditure	35	36.8
No Change in Expenditure	26	27.3
Total	95	100

From Table 8 above, reports revealed varying effects on household food expenditure, with (35.8%) of respondents experiencing reduced expenditure, (36.8%) reporting increased costs, and (27.3%) seeing no change. The literature on organic farming (IFPRI, 2020) supports these mixed results, noting that while organic farming reduces dependency on purchased inputs over time, the initial transition costs can be high. Research by (al a. K., 2020) recommends microfinance support to help farmers during the early stages of organic farming adoption.

4.2.6 Year-Round Food Availability

Respondents were asked about the availability of food in their households and responses are indicated in the table below

Table 9 Year Round Food Availability

Do you have enough food	F	Percentage (%)
Yes	79	83.2
No	16	17
Total	95	100

From Table 9 above, reports indicated that (83.2%) of respondents have enough food throughout the year, while (17%) experience seasonal shortages. These findings align with research by (Muro, 2016) which states that food security is influenced by availability, access, and stability. The (17%) experiencing food shortages suggests a need for improved food storage and diversification, as recommended by (Lusweti, 2021).

4.2.7 Food Security and Economic Impact Data

Table 10 Economic Impact on Expenditure

Economic Impact on Expenditure	Percentage (%)
Increased food expenditure	46.3%
Reduced food expenditure	28.3%
No change in expenditure	25.3%
Total	100

From Table 10 above, reports indicated the economic potential of organic farming, with (46.8%) of respondents selling their produce. This has contributed to household income

and economic stability, although market access and competitive pricing remain areas needing attention.

4.2.8 Perceived organic farming benefits

Respondents were asked about their perceived benefits on organic farming practices their responses were presented as follows

Figure 5 Perceived Organic Farming Benefits

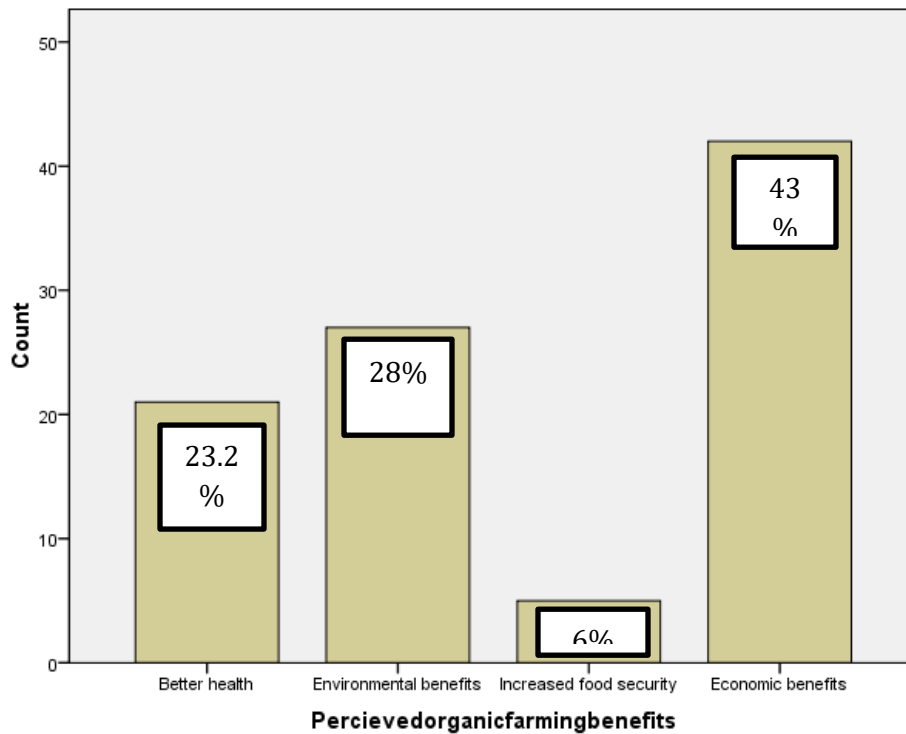


Figure 5 highlights key perceived benefits of organic farming (43%) of respondents cited health benefits, (28%) environmental benefits, (23.2%) improved food security, and (6%) economic gains. These findings align with existing research showing that organic farming promotes healthier food, environmental sustainability, and greater food availability. However, its economic potential remains limited due to market access challenges, suggesting a need for stronger support systems to maximize its impact in Kikonoka Village.

4.2.9 Challenges faced by organic farmers in Kikonoka Village

Table 11 Challenges Faced by Farmers Practicing Organic Farming

Challenges	Percentage (%)
Limited access to organic inputs	74.3%
Financial Constraints	24.4%
Inadequate market access	1.3%
Total	100

From Table 11 above, reports indicated that the main challenges faced by farmers include limited access to organic inputs (74.3%), financial constraints (24.4%), and inadequate market access (1.3%). These findings align with (Grady, 2005), who identified input availability as a major barrier to organic farming. Additionally, financial constraints were emphasized by (Padel, 2017) as a factor hindering the transition to organic methods.

4.2.9 Suggested Improvements

Table 12 Suggested Improvement

Suggested Improvements	Percentage (%)
Better access to organic inputs	61%
Financial support	20%
More training	17%
Improved market access	2%
Total	100

From Table 12 above, reports indicated that (61%) of respondents suggested improved access to organic inputs, (20%) emphasized financial support, (17%) requested more training, and (2%) wanted better market access. These findings align with research by (al a. E., 2018), which emphasizes that investment in farmer training, financial assistance, and market development is key to scaling up organic farming.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

This chapter synthesizes the findings of the study, drawing conclusions and providing actionable recommendations to address the challenges and enhance the outcomes of organic farming practices. The discussion is anchored on the study objectives, emphasizing the critical role of organic farming in improving food security and economic welfare in Kikonoka Village, Kitoba Sub-county.

5.1 Summary of Findings

5.1.1 Organic Farming Practices in Kikonoka Village

The study revealed that 53.9% of respondents practice organic farming, utilizing sustainable techniques such as crop rotation (44.2%), composting (30.5%), and green manure (13%). These practices align with global organic farming trends, which emphasize ecological balance and soil health improvement. However, the remaining 19.1% of respondents who do not engage in organic farming highlight the existence of barriers such as limited knowledge and resources.

5.1.2 Impact on Food Security

The findings show a significant improvement in food security, with 74.7% of respondents reporting better food quality and 69.5% indicating increased quantity. These outcomes affirm the role of organic farming in enhancing food availability and nutritional diversity. Nonetheless, 9.5% of respondents expressed uncertainty, pointing to gaps in knowledge or external challenges like climate variability.

5.1.3 Economic Benefits of Organic Farming

The study highlighted the economic potential of organic farming, with 46.8% of respondents selling their produce. This has contributed to household income and economic stability, although market access and competitive pricing remain areas needing attention.

5.1.4 Challenges Faced by Farmers

Key challenges identified included:

- Limited access to organic inputs (41.1% of respondents).
 - Financial constraints (13.5%), which hinder farmers from scaling their practices.
 - Inadequate market access (0.7%), which reduces profitability.
- These barriers limit the widespread adoption and impact of organic farming practices, underscoring the need for targeted interventions.

5.2 Conclusions

Organic farming is a transformative practice for Kikonoka Village, with the potential to enhance food security, promote environmental sustainability, and boost household income. While significant progress has been made, challenges such as input availability, financial barriers, and market constraints remain critical bottlenecks. Addressing these challenges will require collaborative efforts from farmers, policymakers, and development partners.

The findings reinforce the importance of sustainable agriculture in achieving Uganda's national goals for food security and rural development. By investing in organic farming practices, Kikonoka Village can serve as a model for other rural communities.

5.3 Recommendations

5.3.1 Strengthen Access to Organic Inputs

Establish local supply chains for organic inputs, such as compost materials and bio-pesticides, to ensure affordability and availability.

Partner with NGOs and agricultural cooperatives to provide subsidized inputs for low-income farmers.

5.3.2 Enhance Financial Support Mechanisms

Introduce microfinance programs tailored to organic farmers, enabling them to overcome financial barriers and invest in sustainable practices.

Develop grant opportunities for farmer groups transitioning to organic farming.

5.3.3 Build Market Linkages and Value Addition

Facilitate direct market access through cooperatives and farmer organizations.

Offer training on value addition, branding, and certification to increase the competitiveness of organic products in premium markets.

5.3.4 Capacity Building and Farmer Training

Conduct regular workshops and field demonstrations to enhance farmers' knowledge of organic practices and their benefits.

Integrate food security literacy into training programs, equipping farmers with skills to track and measure their food production outcomes.

5.3.5 Implement Monitoring and Evaluation Systems

Establish a feedback mechanism for farmers to share their experiences and challenges.

Regularly assess the impact of interventions to refine strategies and ensure sustainable outcomes.

5.4 Areas for Further Research

While this study has provided valuable insights, additional research is needed to deepen understanding and inform policy interventions. Suggested areas include:

Long-term research into organic farming reveals its potential to significantly impact food security, income stability, and environmental resilience over time, particularly for smallholder farmers in rural areas. However, gender-specific challenges remain a critical barrier, as women often face limited access to land, credit, and training, which hampers their ability to fully adopt and benefit from organic practices. Addressing these disparities is essential for designing inclusive agricultural interventions. Additionally, the success of organic farming as a sustainable livelihood strategy is closely tied to market dynamics; strategies such as organic certification and branding play a crucial role in improving profitability and expanding market access. Furthermore, organic farming has shown promise in enhancing farmers' ability to adapt to climate change by promoting soil health, biodiversity, and crop diversification factors that are especially vital in climate-vulnerable regions like rural Uganda.

10. References

- Agarwal, B. (2014). Food security and women's contributions in rural areas. *Journal of Rural Studies*, 34, 123–134. <https://doi.org/10.1016/j.jrurstud.2014.01.001>
- Akinmoladun, O., Adeyemi, A., & Salami, A. (2021). The role of women in organic farming and food security in Nigeria. *Agriculture and Food Security*, 10(5), 45–60. <https://doi.org/10.1186/s40066-021-00296-5>
- Altieri, M. A., & Nicholls, C. I. (2017). Agroecology: A brief account of its origins and current trajectory. In D. Z. (Ed.), *Ecological Studies* (Vol. 231, pp. 151–176). Springer. https://doi.org/10.1007/978-3-319-47883-7_9
- Food and Agriculture Organization of the United Nations (FAO). (2018). the future of food and agriculture – Alternative pathways to 2050. FAO. <https://www.fao.org/publications>
- International Food Policy Research Institute (IFPRI). (2020). leveraging agriculture for improving nutrition and health: The way forward. IFPRI. <https://www.ifpri.org/publication/leveraging-agriculture>
- Moyo, B., Zikhali, P., & Ndlovu, T. (2018). Age and gender roles in organic farming: Insights from Zimbabwe. *International Journal of Agricultural Sustainability*, 16(2), 89–102. <https://doi.org/10.1080/14735903.2018.1440462>
- Osei-Akoto, I., Mensah, A., & Boateng, K. (2015). Women and organic farming in Sub-Saharan Africa: A pathway to food security. *African Development Review*, 27(2), 196–211. <https://doi.org/10.1111/1467-8268.12138>
- Pretty, J., Toulmin, C., & Williams, S. (2011). Sustainable intensification in African agriculture. *International Journal of Agricultural Sustainability*, 9(1), 5–24. <https://doi.org/10.3763/ijas.2010.0583>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Sahoo, P., Kumari, N., & Behera, R. (2017). Women's education and organic farming: Evidence from rural India. *Journal of Sustainable Agriculture*, 39(3), 204–221. <https://doi.org/10.1080/10440046.2017.1289333>

Tadesse, G., Alemu, T., & Abebe, W. (2019). Agricultural education and women's role in organic farming in Ethiopia. *Journal of Agricultural Education and Extension*, 25(1), 7–18. <https://doi.org/10.1080/1389224X.2018.1533906>

APPENDICES

1. QUESTIONNAIRE USED IN THE STUDY

Appendix 1 Research Questionnaire

Title; the Influence of Organic Farming Practices on Food Security in Kikonoka Village
Kitoba Sub County in Hoima District

Introduction

This research questionnaire is designed by Katusabe Jackline, a student at African Rural University pursuing a Bachelor's degree of Science in Sustainable Agriculture. The purpose of this questionnaire is to gather insights on the influence of organic farming practices on food security within Kikonoka Village. Organic farming, characterized by the use of natural inputs and sustainable methods, is increasingly recognized for its potential to improve both the quality and quantity of food production. This survey seeks to understand the experiences, challenges and benefits that local farmers encounter when practicing organic farming and how these practices impact food security at the household level.

Your participation in this survey is crucial as it will provide valuable information that can contribute to enhancing organic farming practices in the community. The data collected will remain confidential and will be used solely for research purposes. By sharing your experiences, you are helping to create a better understanding of how organic farming can be a tool for improving food security in Kikonoka Village.

Instructions

Please answer the following questions based on your personal experiences and observations.

Section A; Demographic Information

1. Age;

- Below 20

- 21-30
- 31-40
- 41-50
- Above 50

2. Gender;

- Male
- Female
- Other

3. Education Level;

- No formal education
- Primary Level
- Secondary Level
- Tertiary Education
- Other (please specify).....

4. Occupation

- Farmer
- Trader
- Teacher
- Student
- Other (please specify).....

Section B; Farming Practices

1. Are you currently practicing organic farming?
 - Yes
 - No
2. How long have you been practicing organic farming?
 - Less than 1 year
 - 1-3 years
 - 4-6 years
 - More than 6 years
3. Which organic farming practices do you use?

(Select all that apply)

- Compositing
- Crop rotation
- Green manure
- Natural pest control
- Others (please specify).....

4. Do you face challenges any challenges with organic farming?

- Yes (please specify).....
- No

Section C; Food Security

1. Has the adoption of organic farming improved the quantity of food produced in your household?

- Yes
- No
- Not sure

2. Has the adoption of organic farming improved the quality of food produced in your household?

- Yes
- No
- Not sure

3. Do you have enough food to meet your household's needs throughout the year?

- Yes
- No
- Sometimes

4. How has organic farming affected your household's food expenditure?

- Reduced it
- Increased it
- No change

5. Do you sell any of the produce from organic farming?

- Yes

- No
- 6. If you sell, how does this income impact your household's food security?
 - Significantly improves
 - Somewhat improves
 - No impact
 - Reduces food security

Section D; Perceptions and Recommendations

1. What are the perceived benefits of organic farming in your community? (select all that apply)
 - Better health
 - Environmental benefits
 - Increased food security
 - Economic benefits
 - Others (please specify)
2. What improvements would you suggest to enhance the effectiveness of organic farming in your area?
 - More training and education
 - Better access to organic inputs
 - Financial support
 - Improved market access
 - Others (please specify)
3. Any additional comments or suggestions related to organic farming and food security?
.....
.....
.....
.....
.....

Thank you for participating in this survey. Your input is highly valuable.

Appendix 2 Structural Tension Chart for the Community

ACCOUNTABLE	ACTION STEPS	DUE DATE
Jackline	To find out the current state of food security in Kikonoka Village	5 th Sept, 2024
Jackline	Organic farming practices currently used in the area identified	4 th Sept, 2024
Jackline	To find out the impact of organic farming practices on crop yields and food availability	2 nd Sept, 2024
Jackline	To find out challenges faced by farmers in adopting organic farming practices	30 th Aug, 2024

Current reality

- Farmers are available
- Fertile soils and favorable climatic conditions
- Reliance on Conventional Practices
- Limited access to information
- Market constraints
- Financial barriers.

Appendix 3 *the photos below show some of the participants filling questionnaires*



