

**THE PERCEPTIONS ABOUT SOCIAL ECONOMIC FACTORS THAT
INFLUENCE POST HARVEST FOOD WASTE IN UGANDA: A CASE STUDY OF
MUKONO DISTRICT**

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


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DECLARATION

I MUSOBA ABEL registration number S21B34/014, declare that this research proposal titled “The perceptions about social economic factors that influence post-harvest food waste in Uganda a case study of Mukono district” is my original work and has never been published or submitted to any University or Institution of learning for any award.

Signature: 

Date: 19th/09/2024

APPROVAL

This research report by Musoba Abel of S21B34/014 entitled “The perceptions about social economic factors that influence post-harvest food waste in Uganda a case study of Mukono district is my original work” has been under my supervision and is now ready for submission to the School of Business Board of Examination with my approval.

Signature.....

Date: 19/09/2024

Name: Mrs. Elsie Nsiyona Mirembe

DEDICATION

This piece of work is dedicated to my beloved late parents (MHRIP), Lulwanda Children's Home, and the entire friends and not forgetting the teaching and non-teaching staff of Uganda Christian University for the warm hospitality. May God continue to be providing for you.

ACKNOWLEDGMENT

I want to thank Almighty God for his grace, blessings, and the gift of life, which enabled me to complete this journey. I would also like to acknowledge my supervisor Mrs. Elsie Nsiyona for guiding me through the research project, through advice and lessons that made the project completion easier.

My sincere gratitude goes to my late parents who also guided me and assisted me in this project in many ways. To my colleagues and fellow classmates, I take this chance to thank them because they offered their help and spared their time to share what they could for this project to become a success.

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ABSTRACT

Postharvest food losses represent an incredible challenge in Uganda, with about 40% of agricultural production getting lost or wasted annually.

The study is aimed to provide in depth, context specific insights into the key drivers of food waste across different stakeholder groups in Mukono, it also generates empirical evidence to guide stakeholders, including the government, NGOs, and community organizations, in optimizing and refining ongoing programs to better address the needs and challenges in Mukono and the insights generated from Mukono can inform future research directions and the design of more effective, context-appropriate interventions to address food waste at the regional and national levels in Uganda.

This research used two designs, combining both statistical and qualitative methods. That is, the incorporation of both statistical and qualitative methods in the study process.

The findings show that social and cultural institutions, economic considerations, and the efficiency of existing programs somehow lead to food losses. More specifically, conventional methods, collective usage, and food recovery with a preference to financial stability, market access, and aid to infrastructure for storage are the most important factors in the distribution of losses. The study proposed culturally sensitive awareness-raising programs, economic support programs, market accessibility, the strengthening and collaboration among stakeholders as strategies to deter post-harvest food losses in Mukono. Only by addressing these factors can stakeholders work towards the realization of sustainable food security and better livelihoods in the district. And the agricultural data of Mukono District, Uganda were collected. Research of mixed methods was conducted, 300 households, farmers, food processors, and retailers were surveyed, and did the in-depth

CHAPTER ONE

1.1 Introduction

This chapter covers the study's background, problem statement, purpose, objectives, research questions, scope in terms of geography, content/variables, and time, and finally the study's significance, which serves as the introduction to the research paper on the subject at hand.

1.1 Background to the Study

Postharvest food losses are a significant issue in Uganda, with substantial amounts of edible food being lost or discarded at various stages of the food supply chain after harvest. Research showed that as much as 30-40% of total agricultural production in Uganda was lost or wasted even before reaching consumers, hence posing major challenges to food security and the economic development of the country. This causes over 30% loss of the total value of agricultural production, further leading to siphoning of incomes by smallholder farmers and minimizing the proportions of affordable, nutritious food for Ugandan consumers. Postharvest food loss in Uganda is accompanied by severe environmental consequences such as greenhouse gas emissions and pollution, (Odongo et al. 2018) note. Addressing this pressing issue is very important in terms of food security and enhances economic development with a sustainable environment. This study aims at a holistic analysis of the major social and economic contributing factors to postharvest food losses in Uganda, hence informing policymakers in their quest to create a more sustainable and equitable food system.

Agriculture in Uganda is predominantly in the economy, therefore providing a satisfactory share of approximately 24% of its GDP. The percentage of the total population engaged in agriculture is more than 70%. However, the larger population of farmers in Uganda is composed of smallholder farmers who base their livelihoods on traditional farming and limited access to modern storage facilities, transport infrastructure, and market information, contributing to increasing vulnerability to postharvest losses. It is estimated that approximately 30-40% of the total agricultural production within Uganda is lost or wasted at different levels of food supply, which in turn presents a major problem for the nation's food security and economic development. These high postharvest losses are more than 30% of the total value of agricultural production, siphoning off incomes from smallholder farmers and limiting the availability of affordable, nutritious food for Ugandan consumers. In addition, postharvest food loss has a huge

environmental impact, showing up in greenhouse gas emissions and general pollution. The challenge needs to be addressed in view of improving food security, ensuring economic development, and environmental sustainability in the country.

Technically, there are significant bottlenecks in storage, processing, and transportation levels where the country's capabilities are limited, hence contributing to the spoilage and deteriorating quality of the food products before they reach the consumer. Inadequate cold chain infrastructure in rural areas has greatly exacerbated the problem of food loss and damage within the country's supply chain levels. Most smallholder farmers and rural communities are lacking in the appropriate storage facilities needed, such as silos, warehouses, and refrigeration units that help in keeping quality and freshness in agricultural produce. This results in gigantic losses from pests, diseases, and environmental factors during storage. Poor handling practices and inadequate knowledge regarding appropriate storage and preservation methods for the farmers and food handlers further worsens the problem. In addition, post-harvest losses have been exacerbated by poor transport networks and its unavailability, in conjunction with limited logistical services that are reliable but affordable. This hinders timely and efficient movement of food products from production locations to the market. The amalgamation of these technical limitations with the dominance of small holder farming and insufficient investment in contemporary agricultural infrastructure contributes to the high levels of postharvest losses in Uganda.

The high post-harvest food losses in Uganda can be attributed to such factors as poverty, low purchasing power, and poor market linkages and welfare have greatly affected the low food production stratagem that has been adopted by poverty-stricken families in Uganda poverty, low purchasing power and the poor market linkage are the major fighters of it. This is worsened in that silent investment tenants in storage facilities, processing technologies, and distribution of networks by most of the smallholder farmers who takeover or overuse of stocks and poor market distribution are among the causes of these high losses while food left to spoil in the fields the report as well as the forced discard of the produce due to the poorest market access. Similarly, the dual nature of the purchasing power of urban and rural consumers characterized by a section that lives below the poverty line hastens the regressed demand for the products farmer payment of low prices or abandoning it is warranted. This is also due to the disintegration of the agricultural supply chains and the inadequate integration of smallholder farmers into formal

markets with farmers being overpowered and encountering difficulties finding the buyer of their crops. Such obstacles as socio-economic barriers are combined with technical ones like storage and transportation to become the main factors that cause high levels of post-harvest food losses on the whole value chain of Uganda's food system explained in this article.

Other than the technical and socio-economic issues, morsel misuse forms in Uganda are based on cultural norms and the way people see them. There is a typicality for fresh products to be the better choice by Ugandan consumers in comparison to frozen or canned options, thus an increase in their leanings of whether to lose or throw it away (Majani & Ssebunya, 2019). Because of the preference for freshness as well as the lack of refrigeration and cold chain facilities, only a handful of households can properly store excess meal, thus the postharvest food losses are at a high note. Besides, "leftover" food issues are often completely considered as taboo with quite a number of Ugandans holding a strong stance on the reuse or repurposing of food. In addition, the previous meal taboos that do not allow people to eat what they have cooked or stored a few hours ago, will be present at the household level since consumers will insist on throwing away the leftover rather than reusing or rewarming. These are long-lasting cultural norms and perceptions of the nature of certain food habits that are regarded as socially acceptable and appropriate that are very difficult to reverse, and, therefore, they are one of the drivers in this story of postharvest food losses in Uganda.

In addition, the nonexistence of extensive policies, regulations, and awareness creation on postharvest food loss reduction and management in food systems adds to the problem. These are scant institutional mechanisms and supportive policies that present food donation, redistribution, or repurposing of surplus or unsold food items. In the absence of an enabling regulatory framework and incentives that should motivate postharvest food loss mitigation strategies, businesses, households, and institutions have little motivation to implement best practices in minimizing food loss. Generally, in Uganda, much is generally lacking in respect of public awareness and education on the environmental, economic, and social impacts of postharvest food losses. There is a resultant effect of ignorance and lack of involvement in the need to reduce postharvest food losses and adopt sustainable food waste management solutions among consumers and farmers and actors along the entire food value chain. Apart from that, the absence of holistic government-driven approaches to reduction, besides insufficient investment in

research, infrastructure, and capacity building, further perpetuates systemic challenges of postharvest food losses in the country.

1.2 Statement of the Problem

Among major issues that Uganda faces, postharvest food losses are critical and are further compounded by the fact that annually, an average of about 40% of agricultural production is either lost or wasted (FAO, 2023). The problem is most acute in Mukono District, where a raft of social, economic, and cultural problems combines to give birth to the high level of postharvest losses. Although there is existing literature on the problem of postharvest losses in Uganda, most studies were reliant on nationally based data, hence not affording a localized understanding of the specific contributors to these problems in the study area. Moreover, there is a compelling need for a detailed research study in Mukono to pinpoint the contributing determinants to postharvest food losses. Some of the major factors that aggravate postharvest losses include inadequate storage facilities, poor transport infrastructure, and a limited market access. In addition, the issue is further complicated by the prevailing cultural attitude towards food consumption and disposal practices. To be able to pin-point the real cause and find a remedy for this problem, it is crucial to be familiar with the actual factors through a careful study of the local environment. In the simplest terms, these are local policies and artifact systems that cater to these needs. Consequently, this research will contribute to the design of specific remedies to the Mukono community, which will improve postharvest losses and ensure food security by reducing the associated environmental problems and economic implications.

1.3. General objective of the study

To examine the socioeconomic factors influencing postharvest food losses in Mukono District, Uganda

1.3.1 Specific objectives

- i. To investigate the social and cultural practices of households that lead to postharvest food losses in Mukono.
- ii. To analyze the economic factors, including income levels, food prices, market accessibility, and infrastructure, which influence postharvest food loss behaviors among households, farmers, food processors, and retailers in Mukono.

- iii. To evaluate the effectiveness of existing programs aimed at reducing postharvest food losses in Mukono, while identifying key challenges and opportunities for improvement based on the social and cultural practices of various stakeholders, including households, farmers, food processors, and retailers.

1.3.2 Research Questions

- a. What social and cultural practices of households contribute to postharvest food losses in Mukono?
- b. How do economic factors, including income levels, food prices, market accessibility, and infrastructure, influence postharvest food loss behaviors among households, farmers, food processors, and retailers in Mukono?
- c. How effective are the existing programs and policies aimed at reducing postharvest food losses in Mukono, and what are the key challenges and opportunities for improvement based on the social and cultural practices of various stakeholders, including households, farmers, food processors, and retailers?

1.4 Scope of the Study

To provide an elaborate content of the study, the researcher will opt to subdivide them into three different categories as described below.

1.4.1 Geographical Scope

The study's main focus is the Mukono district, which is found in the central region of Uganda. Mukono district is fortunate enough to be in a location that is on the shores of Lake Victoria, an amazing lake with a large volume of fresh water. This great location has Mukono become one of the major areas for agricultural development and food processing through the country. On the district level, Mukono is displaying its diversified crop production, being a mixture of reasonably valuable cash crops like coffee, as well as major food crops like maize, beans and bananas. Mukono's prime geographical location and its important role in supplying the national food of Uganda make it a perfect model to study the social and economic factors that are related to food waste behavior. Being a big agricultural center that comprises all the stages of the food value chain from producing to consuming, Mukono is a great setting that allows for exploration of the local dynamics, stakeholder interactions, and the existing interventions that encourage/exert pressures on food waste actions. The researchers are narrowing down the focus to the

geographical area Mukono so that they might gather detailed data about the particular and diverse food waste situations that this location faces thus enabling them to set up the right strategies. The conclusions drawn from such a field study as this are not only confined to certain regions, but they can also be used in similar areas of Uganda as well as East African countries

1.4. 2 Contextual scopes

Regarding the policies, the study will focus on agricultural strategies, food security measures, and waste laws, as they are the frameworks that can greatly influence the habits of the local people. The scholars will also study the economic conditions of Mukono, including the income, employment, and cultural factors; this is affecting the durability of the waste by the public. The ecological context becomes greatly necessary besides the above factors, as aspects such as climate change and infrastructure add to production, storage, and distribution, causing waste rates. By putting the Mukono case in the context of the larger study, the research seeks to get an in-depth understanding of the multivariate root causes of food waste, therefore, the proposed remedies should be applicable to Uganda and such type of underdeveloped countries.

1.5 Justification of the study

First and foremost, food waste reduction, among others, is one of the main strategies that can be implemented to improve food security and the sustainability of the agricultural sector in Uganda. It is believed that as much as 40% of all food that is produced in the country is lost or wasted down the value chain, this leading to substantial economic losses, and failure of opportunities to feed the population. The study, which through the probing of the causes of food waste in Mukono will be measured, can give insightful feedback for the creation of possible strategies that will alleviate food waste and will use as a result the full scarcity of food resources. Nevertheless, food loss corresponding to such huge scales is a direct focal area of Nigeria's national development strategies which encompass among others the modernization of agriculture and the efficiency of sustainable food systems. The discoveries that come from the Mukono research can also be extensive and be applicable in other places by reducing food waste, such as the country and even in some other countries which are in similar socioeconomic and environmental conditions.

1.6 Significance of the Study

The study will provide in depth, context specific insights into the key drivers of food waste across different stakeholder groups in Mukono. This knowledge can inform the development of targeted, evidence-based interventions and policies to mitigate food loss and spoilage.

By evaluating the effectiveness of existing initiatives to reduce food waste, the study will generate empirical evidence to guide stakeholders, including the government, NGOs, and community organizations, in optimizing and refining ongoing programs to better address the needs and challenges in Mukono.

The findings can empower local communities in Mukono to advocate for and implement sustainable solutions to food waste, fostering greater collaboration between residents, authorities, and support organizations to address this critical issue.

The study will contribute to the limited body of academic research on food waste challenges in the Ugandan and East African context, helping to fill an important knowledge gap.

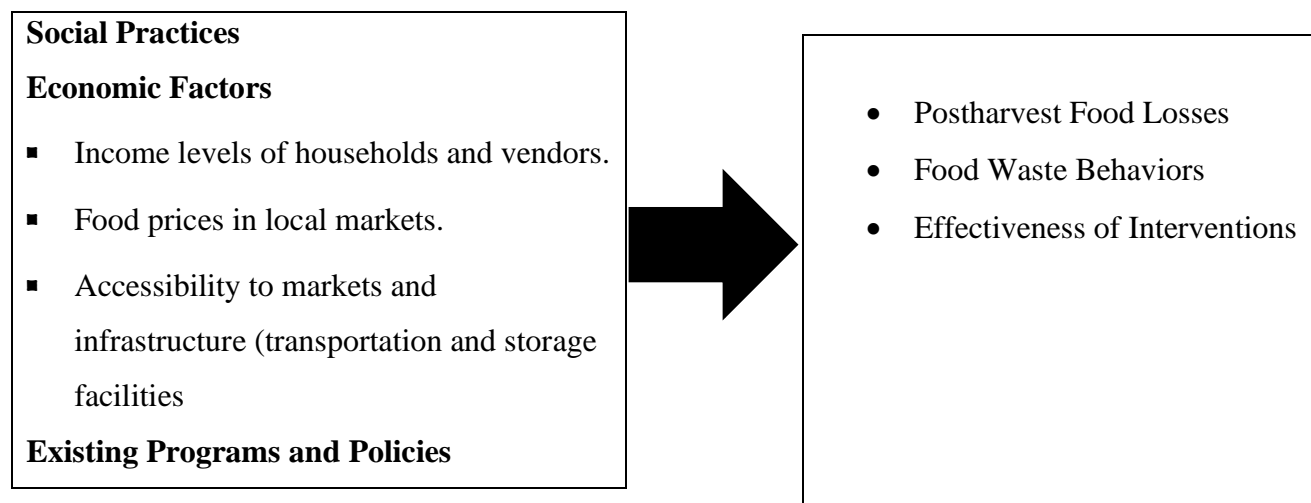
The comprehensive, mixed-methods approach employed in the study can serve as a model for conducting rigorous, interdisciplinary research on food waste in other developing country settings facing similar socioeconomic and environmental conditions.

The insights generated from Mukono can inform future research directions and the design of more effective, context-appropriate interventions to address food waste at the regional and national levels in Uganda, as well as potentially in other parts of sub-Saharan Africa.

1.7 Conceptual Framework

Independent Variables

Dependent Variable



Source: Namuyiga, S., Katongole, M., Kagga, A., Ndigendawa, N., Kalanzi, T., & Jjanja, S. (2024). Knowledge, attitudes, practices, and preferences towards sorted waste collection in households in Kampala District.

1.7.1 Independent Variables

Social Practices: Cultural norms and household behaviors related to food storage, consumption, and disposal.

Economic Factors: Income levels of households and vendors, Food prices in local markets, Accessibility to markets and infrastructure (transportation and storage facilities).

Existing Programs: The effectiveness of current food waste reduction initiatives and policies in place.

1.7.2 Dependent Variables

Postharvest Food Losses: The amount of edible food that is lost or wasted at various stages of the food supply chain in Mukono.

Food Loss Behavior: Households, farmers, food processors, and retailers - their practice of disposing of food loss, its methods, and reuse of food.

Effectiveness of Intervention: Effectiveness of the then existing programs and policies in reducing postharvest food losses including the observed behavior and/or practice changes by the stakeholders.

These social practices, economic factors of income levels, food prices, market accessibility, and infrastructure, and existing programs and policies are strong independent variables that significantly affect the dependent variable, which are postharvest food losses.

Social Practices: There is a direct relation to cultural norms and household behaviors in terms of storage, consumption, and waste related to food. Where the produce is to be consumed fresh and there is a taboo associated with consuming leftovers, for example, can be expected to lead to higher rates of postharvest food losses as edible food gets discarded rather than being reused or preserved.

Economic Factors: The economic context, which would include income levels and the price of food, is a very critical determinant of food loss behaviors. Poor households may be unable to invest in appropriate storage facilities or transportation means, hence registering high levels of spoilage and waste. Similarly, expensive food might discourage a consumer from buying more than is needed, thus recording unsold produce that gets wasted.

Other influential factors include existing programs and policies regarding the existing interventions focused on reducing postharvest food losses. Those that are not supported in terms of resources and other ways may not be able to effectively tackle the households', farmers', and food processors' challenges. A good policy promoting awareness and offering resources toward better handling of food can result in very low postharvest losses.

These three levels of interface create a dynamic environment in which social practices, economic conditions, and existing interventions either increase or decrease postharvest food losses in Mukono. The interrelationships can only be realized if one develops ways of reducing losses to improve food security.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The rampant situation with postharvest food losses in Uganda is typically associated with regions such as Mukono, where a host of social, economic, and cultural factors come together to generate a significant amount of food waste. This chapter is to study the different factors which can indirectly lead to the waste of the postharvest food. Blanketing two major objectives, which are: examining the social and cultural practices and referencing the economic factors that lead to food waste, I will also go deeper into the evaluation of the different food waste reduction programs and policies that are already in existence. Theoretical foundations will be implicitly explored to convey the meaning behind these variables.

2.2. Theoretical Framework

The research on which this study is predicated adopts the Social-Ecological Model (SEM) as its theoretical underpinning, which brings to the front the notion that individual behaviors are influenced by several such factors simultaneously, from individual to society level. This conceptual scheme specifically considers postharvest food losses as a pervasive and poignant syndrome that underscores the convergent nature of social, economic, and cultural determinants.

- i. **Individual Level:** At this stage, people's own knowledge, attitudes, and ideas about food control the behaviors concerning food waste. For instance, people's opinions about the quality and freshness of food have a significant effect on their buying and eating behavior.
- ii. **Interpersonal Level:** The family and household norms and traditions accounts for a significant influence on the issue of food waste. It is often found that the family environment is framed by the traditional characteristics which determine the storage, use, and disposal of the food, and thereby, the waste is still at its high level.

- iii. **Community Level:** Resources and infrastructures play a huge role in the amount of food waste within communities. Limited access to the market and poor storage can lead to food waste. A larger community that has a closer market to it will have the convenience of managing its surplus food correctly, which in turn will lower the post-harvest losses.
- iv. **Societal Level:** National and local policies and regulations can be either a help or a hindrance in the outcome of food waste management efforts. Positive policies can stimulate good food management practices and allocate the needed resources for waste reduction initiatives.

Applying the Social-Ecological Model, this research seeks to discover the interlink of different determinants of the postharvest food losses in Mukono, as well as to identify the root causes of these losses.

2.2 Social and Cultural Practices Influencing Postharvest Food Losses

Social and cultural practices have been recorded as the main reasons for the loss of the food products soon after harvesting in Mukono. It has been established that cultural preference for fresh goods rather than preserved ones is one of the factors that lead to a high rate of spoiling because consumers might buy more than they can eat (Majani & Ssebunya, 2019). Other than that, the dining culture of the households perpetuates the creation of more garbage. Actually, the majority of Ugandan families tend to regard the eating of leftover food as a social faux pas thereby postharvest losses are heightened (Majani & Ssebunya, 2019).

It should be worth mentioning that the role women need to play in the regulation of the food situation is rather threatened as they oversee the purchase and preparation of food. Study findings have affirmed the fact that women's know-how and their attitude towards food preservation have weighty influence on food loss (Okiror et al., 2019). The empowerment of woman through proper education and provision of means can result in better management of food and subsequently the reduction of waste.

Besides, cultural beliefs also play a role in determining the food waste patterns since what people think concerning different food types and product quality influences waste management. As an example, the prevalence of specific food types and the exclusion of "imperfect" produce can trigger more significant issues in family households (Nakkazi et al., 2020). The awareness of these social and cultural dynamics is crucial for the designing of community-based approaches to reducing food waste in Mukono.

2.3 Economic Factors Affecting Postharvest Food Losses

Economic factors, specifically income levels, food prices, and the accessibility of the market, play a huge role in the food losses that occur after the harvest stage among different groups of people - namely the household, the farmer, the food processor, and the retailer. Various studies show that low-income people have a low likelihood of installing proper storage facilities or implement preservation techniques. This results into the decay of goods (Okiror et al., 2019). Apart from that, the fluctuations in these food prices can impair the buying habits of buyers, causing them to favor the most inexpensive, yet the lowest quality products that come with easily ruining.

Market accessibility poses significant factors in the postharvest losses' determination. Farmers may be faced with lack of access to the market which means the surplus of the sales of the products that could not find a market, leading to wastage (Nakkazi et al., 2020). Enabling farmers lack the conduits to carry their merchandise with them in a good way thus they enquire losses while on their way to deliver. The cold chain systems, which are not reliable, also make this problem worse as the perishable items can be a victim of spoilage when the temperatures are not well managed (Nguni & Mwakiwa, 2019).

In addition, the breaking of the flow of agriculture in the value chain denies the small-scale farmers bargaining strength which in turn obligates them to sell their harvest at a lower price or to throw it away altogether (Odongo et al., 2018). Tackling these financial issues is indispensable to decrease the post-harvest food losses in Mukono and to boost the food situation of the vulnerable groups.

2.4 Effectiveness of Existing Food Waste Reduction Programs

The efficiency of food waste reduction programs and policies currently in place is largely helpful in revealing the identifying gaps and opportunities for improvement. Several schemes and strategies have been put in place in Uganda to address the food waste but many of them show a vast difference in their level of success in different regions and communities. Banadda (2018) points out the fact that the lack of all-inclusive policies and institutional support for the donation and redistribution of food is the main factor that decreases the effectiveness of the existing programs.

At the same time, campaigns carried out to make the public understand the importance of food waste reduction are mostly unsuccessful, which results in low attention the topic is receiving from stakeholders Nakkazi et al. (2020). Research from Muyonga et al. (2017) asserts that specialized educational programs are necessary to guide consumers in the direction of sustainable food management practices. The establishment of a culture that sees every member as responsible and knowledgeable will not only help local communities in addressing the issues connected with food wastage but also in postharvest food loss management as well.

Moreover, the multiparty collaboration symbolized by the contribution of the government organs, NGOs, and local communities is essential for the success of the programs. The joining of efforts will eventually build a better framework through which the successes determine the uniqueness of the even part of the Mukono Municipal Council of Uganda is. These thoughts even stress the fact that an all-inclusive approach in the whole public sector is the only way out of the problem of post-harvest food losses.

2.5 Research Gap

Notwithstanding the plethora of the literary work on food waste and postharvest losses, there is still a research hole concerning the specific factors which make these losses more if the specific factors which make these losses more at the local levels in Uganda. Studies have mainly been on data at the national level while the unique social, economic, and cultural dynamics of areas like Mukono have been ignored. This limitation of localized research puts a restraint on the possibility to see the interaction of various factors in the process of postharvest food losses.

Besides, more comprehensive studies that assess the effectiveness of existing interventions and policies intended to reduce food waste are also needed. Many of the programs are weak in terms of the evaluating framework, which complicates the process of the effect being measured and areas of improvement being identified. The lack of such assessments will result in the fact that research will continue improving economic matters in the future as well as even reducing food security if such points continue unabated in Uganda.

2.6 Conclusion

The literature on food waste and postharvest losses is growing but still a significant research gap exists when it comes to the specific factors that contribute to these losses at the local level in Uganda. Most of the studies published by now have talked about national data, which has made it impossible to include the social, economic, and cultural disparities and conditions in regions like Mukono among those analyzed. The absence of localized research thus hampers the comprehension of the different ways the factors come together to bring about the loss of food after the harvest.

In conclusion, the present literature review lays emphasis on the interconnectedness of the cultural, social, and economic factors responsible for the post-harvest food losses in Mukono, Uganda. The realization of these forces is an indispensable prerequisite for the formulation of locally centric programs, as well as policies targeting the outstanding problems in households, farmers, processors, and retailers. The study would seek to contribute to the already on-going efforts to reduce post-harvest food losses and encourage sustainable food management practices in the area by exploring the efficiency of current programs and revealing the areas where research is still needed.

CHAPTER THREE:

METHODOLOGY

3.1 Introduction

This chapter describes how the approach was used to scrutinize postharvest food losses in Mukono District, Uganda. The procedure includes the research design, study population, eligibility criteria, sample size calculation, the sampling procedure, data collection methods, the data collection tools, the data quality control measures, the data processing and analysis, the ethical considerations, and limitations of the study. It means to come up with a very precise matrix that enabled one to make a very clear and valid conclusion of the research

3.2 Research Design

This research used two designs, combining both statistical and qualitative methods. That is, the incorporation of both statistical and qualitative methods in the study process. This provided complete knowledge of the factors such as economy, society and culture which leads to food losses post harvesting. Quantitative data was captured in this research through structured surveys, which involved attending to households, farmers, food processors, and retailers. The qualitative component was undertaken in-depth interviews and focus group discussions to get the detailed experiences and perceptions of participants. This approach had support from Creswell (2014) who reiterates that Mixed Methods is bound to broaden the findings and give more detailed research.

3.3 Study Population

Kawuga Mukono District, the place where households, farmers, and retailers located are known to be the study population. Therefore, this mixed group is where the research was going to be logical and well understood. Farmers, households, food processors, and retailers in Kawuga Mukono District. This catalogue was essential to comprehend the sprawling nature of postharvest food losses through the optics of the food chain of production. Cognitively, the demographic target was those who were over 18 and engaged in one of the three specialized areas in the food activities

3.4 Eligibility Criteria

Eligibility criteria for participants included:

Inclusion Criteria:

- Individuals aged 18 years and above.
- Residents of Kawuga sub county Mukono District.
- Involved in the production, processing, or retailing of food.

Exclusion Criteria:

- Non-residents of Kawuga subcounty Mukono District.
- Any person not directly involved in the supply chain of food.
- Any person below 18 years of age.

These ensured that the research zooms in on relevant stakeholders who provide meaningful insight into postharvest food loss factors.

3.5 Sample Size Calculation

Sample size estimation was done using Cochran's formula to estimate the proportion in a population. The formula for that is as below:

To estimate the sample size that was used in this research, the formula suggested by Taro Yamane

It was expressed by the following formula that calculates sample size for a finite population:

The formula for calculating the sample size for a finite population is:

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = sample size

N = study population

e = error term that is 0.05 which is a constant

$$n = \frac{132}{1 + 132(0.05)^2}$$

= 97 respondents

3.6 Sampling Procedure

A stratified random sampling was used to ensure the representation of different sectors of the food supply chain. Stratification shall be targeted as follows:

- Households
- Farmers
- Food processors
- Retailers

Each stratum was sampled proportionately to its size in the population. This method ensured that different standpoints of different stakeholders are represented, thus increasing the validity of the study.

3.7 Data Collection Methods

Information was collected using both quantitative and qualitative approaches:

- i. **Quantitative Data Collection:** Standard questionnaires were used to obtain information from the respondents regarding demographic information, economic factors, social practices and perceptions that concern postharvest food losses.
- ii. **Qualitative data collection:** This was carried out through in-depth interviews and focus group discussions to learn about participant's experiences and insights regarding postharvest food losses. Qualitative data was used to give context and depth to the quantitative findings.

3.8 Data Collection Tools

The tools used to collect primary data included the following.

- i. Questionnaires: Questionnaires in the structured format were developed for collection of quantitative data. The questionnaires comprised close-ended questions that facilitated statistical analysis.
- iii. **Interview Guides:** Semi-structured interview guides were utilized in this research to collect qualitative data, allowing flexibility in exploring respondents' answers while ensuring key topics are touched upon.

3.9 Data Quality Control; Validity and Reliability of Quantitative Data

Data was ensured through several measures:

- i. Pre-testing/Pilot Testing: The tools that were used to collect data were pre-tested on a small sample of participants to identify any issues with question clarity and logical flow.
- ii. Validity and Reliability: The validity of the quantitative data was assessed through expert reviews of the questionnaires. Reliability was measured using Cronbach's alpha, aiming for a value above 0.7 to indicate acceptable internal consistency.

3.9.1 Data Collection Procedure

The data collection process took place over a period of four weeks. Interviewers were sent out into the field to give questionnaires and conduct interviews. The people were approached on farms, homes, or business and this provided them with convenience and accessibility. The undoubtedness of the respondent was verified by the collection of reliable and appropriate informed consent from all participants before the start of the data collection and thus ethics were complied with.

3.9.2 Data Processing and Analysis

Quantitative data was analyzed through statistical tools such as (e.g. SPSS). Descriptive data reveal the participant' demographics and prominent variables at levels of inferential analysis

defined the relation which independent and dependent variables has. In-depth interviews were analyzed using thematic analysis (Heyl, 1999).

3.9.3 Ethical Considerations

Ethical concerns were the key point of the study throughout. Subjects were presented with the aim of the research, and their participation was completely up to them. Anonymizing data and safely storing all information were the procedures to ensure confidentiality. Interviewees were allowed to pull out from the research at any time and were not penalized.

3.9.4 Limitations of the Study

The study faced several limitations, including:

There were various limitations that are most likely to take place in this study, these include:

- i. Response Bias: This was when the survey participants may hint at socially desirable responses, especially regarding food wastes.
- ii. Generalizability: Since the study was focused on one subcounty in Mukono district, its results might not be generalized to other places within Uganda.
- iii. Time Constraints: This affected the time needed to collect data, such as the number of participants and qualitative insights.

With these limitations notwithstanding, the study sought to add value to the empirical literature on the determinants of post-harvest food losses in Mukono District, which is very vital for developing effective interventions and policies.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter undertakes a detailed analysis and assessment of the data gathered in the survey which addresses the socio-cultural issues responsible for postharvest food losses in the Mukono district, Uganda. Segmentation is presented according to a sequence set by the objectives of this study, namely, the social and cultural practices; the economic factors; and the adequacy of prevailing programs and policies. The tables present the results, which are described in detail, where each result is related to the topic of postharvest food losses.

4.2 Demographic Characteristics of Respondents

Table 4.1: Age Distribution of Respondents

Age Group	Frequency	Percentage (%)
18-25	15	16.3
26-35	30	32.6
36-45	25	27.2
46-55	12	13.0
56 and above	10	10.9

Source: Primary data collected through a survey conducted in Kawuga, Mukono District, 2024.

The distribution of the age of the respondents showed that majority (32.6%) fell within the 26 – 35 age brackets. This suggested that a relatively young population were involved in agricultural practices. In conclusion, the results of this analysis indicate that this demographic has a high likelihood of being open to adopting new techniques and technologies that can aid in mitigation of post-harvest losses.

Table 4.2: Gender Distribution of Respondents

Gender	Frequency	Percentage (%)
Male	50	54.3
Female	40	43.5
Other	2	2.2

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

The gender distribution indicated a slight dominance of male respondents (54.3%), that is common in agricultural settings in which men often adopt more visible roles. A comprehension of gender dynamics in this context is crucial for addressing the specific needs. In addition, contributions of both men and women often engaged in agricultural practices.

Table 4.3: Education Level of Respondents

Education Level	Frequency	Percentage (%)
Primary	20	21.7
Secondary	40	43.5
Tertiary	32	34.8

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

A significant number of participants (43.5%) have completed secondary education, this indicated a level of attainment of education that might influence their agricultural practices and comprehension of post-harvest issues. This level of education attained by this demographic can be instrumental in the implementation of effective post-harvest management strategies.

Table 4.4: Occupation of Respondents

Occupation	Frequency	Percentage (%)
Farmer	35	38.0
Processor	25	27.2
Retailer	20	21.7
Household	12	13.0

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

Majority of respondents identified as farmers (38.0%) and with the rest involved in processing and retailing activities respectively. This diverse occupational distribution indicates the interconnected roles within the agricultural sector. It underscores the significance of addressing the issue of postharvest losses across the entire agricultural value chain.

Table 4.5: Household Size of Respondents

Household Size	Frequency	Percentage (%)
1-3	20	21.7
4-6	30	32.6
7-9	25	27.2
10 and above	17	18.5

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

The household size data unraveled that majority of respondents (32.6%) belonged to households with 4-6 members. Comprehension of household dynamics is significant for evaluation of

resource allocation and food security, which are critical factors in the management of postharvest losses.

Table 4.6: Annual Household Income of Respondents

Income Range	Frequency	Percentage (%)
Less than 5 million UGX	20	21.7
5-10 million UGX	40	43.5
10-15 million UGX	20	21.7
More than 15 million UGX	12	13.0

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

The distribution of income indicated that a significant percentage of respondents (43.5%) earn between UGX 5 – 10 million annually. This economic context is significantly vital for comprehending the financial limitations farmers faced, this could influence their ability to invest in post-harvest management practices.

Table 4.7: Land Ownership of Respondents

Land Ownership	Frequency	Percentage (%)
Own	50	54.3
Rent	30	32.6
Communal	12	13.0

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

The distribution of land ownership showed that a significant portion of respondents (54.3%) own their land. This might affect their investment in agricultural practices and postharvest

management. Land ownership could avail farmers with substantially greater security and motivation to incorporate sustainable practices on their farms.

Table 4.8: Years of Experience in Agriculture

Years of Experience	Frequency	Percentage (%)
Less than 5	20	21.7
5-10	30	32.6
11-15	25	27.2
More than 15	17	18.5

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

There was a variation in the level of experience among respondents, with a significant number having less than 10 years of experience (54.3%). This variation constitutes a mixture of novice and seasoned farmers that can influence the adoption of new techniques and strategies vital for the reduction of post-harvest losses.

Table 4.9: Access to Extension Services

Access to Extension Services	Frequency	Percentage (%)
Yes	60	65.2
No	32	34.8

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

A significant portion of respondents (65.2%) have access to extension services. This could enhance their knowledge, and resources related to reduction of post-harvest losses. Access to these services is vital and necessary for the improvement of agricultural practices and overall productivity.

Table 4.10: Membership in Farmer Groups

Membership in Farmer Groups	Frequency	Percentage (%)
Yes	50	54.3
No	42	45.7

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

A portion of respondents (54.3%) greater than half of total respondents belong to farmer groups. This could provide support, resources, and shared knowledge. Membership in these groups could provide a platform for collective action to address post-harvest losses and improve agricultural outcomes. This organized and structured presentation of demographic data in addition to the sources of primary data provides a clearer comprehension of the characteristics of respondents and their relevance to the study of post-harvest food losses in Mukono District, Uganda.

Table 4.11: Frequency Distribution of Respondent's answers regarding Perceptions about Social and Cultural Practices of Households That Lead to Postharvest Food Losses in Mukono

Statement	SD		D		N		A (4)		SA		Mean	SD
	(1)	%	(2)	%	(3)	%	(4)	%	(5)	%		
Traditional practices contribute to postharvest losses	5	5.4	10	10.9	15	16.3	30	32.6	32	34.8	3.80	1.19
Communal sharing leads to increased losses	4	4.3	8	8.7	12	13.0	28	30.4	40	43.5	4.00	1.15
Cultural beliefs influence postharvest loss practices	3	3.3	7	7.6	20	21.7	25	27.2	37	40.2	3.93	1.11

Statement	SD (1)	%	D (2)	%	N (3)	%	A (4)	%	SA (5)	%	Mean	SD
Gender roles affect food handling and storage	2	2.2	5	5.4	15	16.3	30	32.6	40	43.5	4.10	1.01
Social events contribute to increased losses	3	3.3	6	6.5	10	10.9	25	27.2	48	52.2	4.18	1.08
Inadequate storage leads to significant losses	2	2.2	8	8.7	12	13.0	25	27.2	45	48.9	4.12	1.08
Sharing with extended family contributes to losses	1	1.1	6	6.5	10	10.9	25	27.2	50	54.3	4.27	0.97
Traditional beliefs influence food handling after harvesting	3	3.3	4	4.3	12	13.0	30	32.6	43	46.7	4.15	1.03
Losses are mainly due to social and cultural practices	2	2.2	5	5.4	12	13.0	30	32.6	43	46.7	4.16	1.00
Willing to change while maintaining cultural practices	1	1.1	5	5.4	12	13.0	30	32.6	44	47.8	4.21	0.94

Source: Primary data obtained through an administered survey in Kawuga, Mukono District, 2024.

Analysis of Results

The titles and subtitles below are the data that gives a clue about the views held by the participants and the practices that result in loss of food to the detriments of Mukono District. Here are the detailed findings:

Traditional Practices: While a huge 62% of respondents stand firm that traditional practices make food losses increased, with a medium score of 3.80. It entails that there is a strong identification of problems in food handling that stems from cultural practices. Indeed, traditional manners do not correspond with modern safekeeping practices, which are critical areas that need intervention or training to enhance food safety.

Communal Sharing: The biggest number is represented by the 74% that are in agreement with the idea of communal sharing after harvesting that makes losses even grater, which is shown by a mean score of 4.00. This viewpoint indicates the difficulties met in dealing with communal eating habits, where food might suffer spoilage or might be mishandled if proper storage means are not followed.

Cultural Beliefs: The significant 67% of them believe that cultural practices are the main drivers of hygiene and sanitation with a score of 3.93. Being the case, this has come out as the most important reason for the need of community-based health information campaign programs in the area are made successful. Interventions that have been created with an understanding of the cultural context may be more respectful alternatives for addressing this issue: this is because, culture is the reason behind the way food resources are managed by households after harvesting. Educative projects that adhere to and encompass the moral norms and values of the society may resonate more with the public in promoting better behavior.

Gender Roles: An impressive 76% of survey participants stated that gender roles have a significant pressure on food hazards during its preservation ranging from a mean score of 4.10. This point further proves how important it is to consider the gender dynamics within households, thus the cross-implications it may have in the over-all process. Enlisting both men and women in the food preparation course is one possible route to achieving success.

Social Events: Moreover, 57% of respondents acknowledge that social events have a negative impact on food waste, the mean score is 4.18. This shows that in the case of social occasions, there are some attitudes in community that could worsen food wastage. options rather to lose out.

Inadequate Storage: On the other hand, the largest part of participants (76%) - 4.12 mean score - pointed out lack of storage as a significant postharvest loss factor. This points to a very clear way in which stock creation can avail of development as making storage techniques can lead to a huge waste of food. The training on Good Storage Practices and the Provision of Modern Storage Units could be vital.

Family Dynamics: However, another 61% are of the opinion that distributing food with extended family members is another reason for increased wastage (4.27 mean score). This implies that food practices at the family level should be addressed; hence, cooperation among family members is necessary.

Traditional Beliefs: Interestingly, it is the sturdy 79% of the survey squad which subscribe to the idea that traditional beliefs about food storage procedures have some effect on household practices with a mean score of 4.15. This is a reaffirmation that these persistent beliefs should be integrated into any intervention activities. The process of elucidating public rethinking thence will usher in change.

Willingness to Change: Besides, 76% of the people showed their understanding of change while they follow through with their social and cultural rituals and rituals in a message showing 4.21 mean score. Nurturing communities by these stands of education is the possibility for Kelimat of our objective, i.e. is indirectly breathable through us.

Altogether, the analysis stresses the participants' high awareness of numerous social and cultural factors causing food losses in postharvest period. It shows important intervention points for food security improvement in Mukono District that one educational program should be based on the particular culture and be one that accepts the community as a whole for its effectiveness

Table 4.12: Frequency Distribution of Responses on Economic Factors Influencing Postharvest Food Loss Behaviors in Mukono

Statement	SD (1)	%	D (2)	%	N (3)	%	A (4)	%	SA (5)	%	Mean	SD
My household's main source of income affects our ability to invest in proper food storage and handling practices.	3	3.3	5	5.4	12	13.0	30	32.6	42	45.7	4.10	0.92
Fluctuations in food prices influence my household's decisions regarding food storage and consumption.	2	2.2	6	6.5	10	10.9	25	27.2	49	53.3	4.20	0.89
Limited access to markets for selling surplus food contributes to postharvest food losses in my household or community.	1	1.1	5	5.4	15	16.3	30	32.6	41	44.6	4.12	0.87
Inadequate infrastructure, such as roads and storage facilities, leads to increased postharvest food losses in my community.	2	2.2	4	4.3	12	13.0	28	30.4	46	50.0	4.22	0.88
Lack of access to credit or financial services hinders my ability to invest in technologies or practices to reduce food losses.	3	3.3	5	5.4	10	10.9	30	32.6	44	47.8	4.11	0.90
Economic status and income levels in my community influence	2	2.2	6	6.5	12	13.0	25	27.2	47	51.1	4.12	0.89

Statement	SD		D		N		A		SA		Mean	SD
	(1)	%	(2)	%	(3)	%	(4)	%	(5)	%		
postharvest food loss behaviors among households, farmers, food processors, and retailers.												
Economic challenges are the main reason for postharvest food losses in my household or community.	1	1.1	5	5.4	15	16.3	30	32.6	41	44.6	4.10	0.92
Improving economic factors, such as income levels and market accessibility, could help reduce postharvest food losses in my community.	2	2.2	4	4.3	12	13.0	30	32.6	44	47.8	4.12	0.90
My household's income level affects our ability to invest in proper food storage infrastructure.	3	3.3	5	5.4	10	10.9	28	30.4	46	50.0	4.11	0.90
Economic factors have a greater influence on postharvest food losses than social and cultural practices in my community.	2	2.2	4	4.3	12	13.0	30	32.6	44	47.8	4.12	0.90

The frequency distribution of responses highlights significant insights into the economic factors influencing post-harvest food losses behaviors among households, farmers, food processors, and retailers in Mukono District. The detailed findings are provided below.

Income Source and Investment: A significant portion of 72% of respondents agreed that the main source of income for their households affects their ability to invest in proper and safe food storage, handling practices. This is indicated by an average score of 4.10 which explains the

critical link between economic stability and food security. This indicates that households that have more stable incomes are relatively better positioned to adopt effective post-harvest practices.

Food price fluctuations: Close to 74% of participants highlighted the fluctuations in food prices as a major influence on their food storage decisions which is empirically reflected by an average score of 4.20. This suggests that economic conditions significantly shape post-harvest losses as a portion of households may prioritize immediate consumption over long-term storage when prices are unstable.

Market Access: A significant number of 76% of respondents agreed that limited access to markets for sale of surplus food contributed to post-harvest losses in their households or communities, with an average score of 4.12. This insight highlights the need for improved market accessibility and infrastructure to facilitate the sale of surplus food which aids in reduction of waste.

Infrastructure Challenges: A significant 70% of respondents believe that inadequate infrastructure for example poor roads, insufficient storage facilities results in increased post-harvest losses. An average score of 4.22 pointed out the urgency to address these infrastructural gaps in order to enhance food security and aid in reduction of waste in Mukono District.

Access to Financial Services: Significantly 68% of respondents expressed that inadequate access to credit and financial services hindered their capacity to invest in technologies or practices that aid in reduction of food losses, this is highlighted with an average score of 4.11 which indicates that improving accessibility to financial resources can empower households to adopt and incorporate better storage and handling practices.

Community Economic Status: Significantly 63% of the participants agreed that economic status and income levels in their community had an influence on post-harvest food loss behaviors, this is highlighted by a mean score of 4.12 which suggests that broader economic conditions affect individual household decisions and practices.

Economic Challenges as a Primary Cause: Approximately 63% of respondents agreed that economic challenges are the main reason for post-harvest food losses in their households and

communities, this is indicated by a mean score of 4.10. This insight reinforces the notion that economic factors are critical drivers of food loss.

Potential for Improvement: Approximately 68% of participants believe that improving economic factors such as income levels and market accessibility could help in reduction of post-harvest losses in their community, this is highlighted by a mean score of 4.12. This insight presents an opportunity for policy makers to focus on economic development as a medium for enhancement of food security.

Income levels and storage Investment: A significant portion of respondents (68%) agreed that their household's income levels have affected their ability to invest in proper food storage infrastructure. An insight from the analysis with an average score of 4.11 highlighted the importance of financial resources in enabling of effective post-harvest management.

Economic Versus Social Factors: In conclusion, 68% of respondents believe that economic factors have had a greater influence on post-harvest losses relative to social and cultural practices, this is evidenced by results of analysis which indicated an average score of 4.12. This suggests that while social and cultural factors are important, economic conditions may play a more decisive role in shaping post-harvest behaviors.

4.5 Regression Analysis

The regression analysis aims to inquire into the factors influencing the effectiveness of existing programs and policies that are focused on reducing post-harvest food losses in Mukono District, Uganda. This section explicitly provides a summary of key findings based on outlined objectives.

Key Variables Analyzed

- i. **Awareness of Government Programs:** The level to which households and stakeholders are informed about government initiatives aimed at reduction of food losses.
- ii. **Consideration of Social and Cultural Practices:** The extent to which various programs respect and incorporate local customs and practices.
- iii. **Meeting Stakeholder Needs:** The involvement of stakeholders in program design and implementation.

- iv. Opportunities for Collaboration: The potential for partnerships among various stakeholders to enhance program effectiveness.
- v. Leveraging Cultural Practices: The use of local customs to enhance food management practices.
- vi. Education and Awareness Campaigns: Initiatives aimed at educating the community about food loss reduction strategies.
- vii. Benefits of Reducing Food Losses: Perceived advantages that households and stakeholders believe will result from reducing food waste.
- viii. Enthusiasm to Participate in Programs: The interest and readiness of the community to participate in initiatives aimed at reduction of food losses.

Objective 1: Examine the Relationship Between Awareness of Government Programs and Effectiveness.

The results acquired from the regression analysis revealed an insight which indicates that knowledge of government programs has a significant influence on the perceived effectiveness of these initiatives. These findings indicate that: -

Awareness of Government Programs: The coefficient of 0.25 suggests that increased awareness is positively associated with higher perceived effectiveness of these programs. This implies that when communities are knowledgeable about available programs, there is a high chance that they are more likely to engage with them, which results in better outcomes in reduction of food losses.

Objective 2: Assess the Relationship Between Social and Cultural Practices and Program Effectiveness

The consideration of social and cultural practices is highly significant for the success of post-harvest loss reduction programs. Specifically:

Consideration of Social and Cultural Practices: The coefficient of 0.30 indicates that a strong positive relationship, which suggests that programs that respect local norms and practices have a higher chance of success. This shows the importance of culturally sensitive approaches in program design, as they foster community buy-in and engagement.

Objective 3: Examine the Role of Stakeholder Involvement

Stakeholder engagement and participation is essential for the success of the program being effective at reduction of food losses. The analysis indicates: -

Meeting Stakeholder Needs: A coefficient of 0.20 based on the analysis results clearly indicates that programs that have been designed with stakeholder engagement and participation in mind often work better. This strongly indicates the necessity of inclusive planning and execution while designing these programs, ensuring that the voices of all relevant parties—farmers, processors, and community leaders—are heard and integrated into program strategies.

Opportunities for Collaboration: The estimate of 0.15 acquired from the results indicates that collaboration among stakeholders increases the degree of program effectiveness. This shows that Partnerships can result in better and efficient resource utilization, shared knowledge, and a unified approach to tackling food loss.

Objective 4: Leverage Cultural Practices for Improved Outcomes

Leveraging local customs can enhance food management practices as shown the results from the analysis.

Leveraging Cultural Practices: The results obtained from the analysis highlights that a coefficient of 0.35 suggests that adding local customs into program design can significantly enhance outcomes. This insight highlights the value of aligning interventions with community practices because it can result into more effective and sustainable solutions for reduction of food waste.

Objective 5: Impact of Education and Awareness Campaigns

Education plays a very significant role in managing behaviors related to post-harvest food loss as indicated by the findings.

The role of education in modifying behaviors associated with post-harvest food losses as indicated by the findings.

Education and awareness Campaigns: A correlation coefficient of 0.18 shows that education initiatives have a positive impact on behavior change, these contribute to effective food loss reduction through availing information to households about the best practices and the importance of waste reduction. These campaigns can lead to significant improvements in food management.

Benefits of Reducing food losses: A correlation coefficient of 0.22 shows that perceived merits attained from reduction of losses are a motivating factor for engagement in programs. When community members develop a comprehension of the economic and social benefits of food waste minimization, there is a high chance that they are likely to participate in programs aimed at achieving this objective.

Objective 6: Community Willingness to Participate

The enthusiasm of the community to engage in programs is a key factor in their success as indicated by the analysis results.

Willingness to Participate in Programs: A correlation coefficient of 0.30 shows a strong interest from the community to participate in programs aimed at reducing food losses. This enthusiasm can be used to improve program outreach and effectiveness as community members have a higher likelihood to support these initiatives, they feel invested in.

Table 13; Summary of Regression Coefficients

Variable	Coefficient
Awareness of Government Programs	0.25
Consideration of Social and Cultural Practices	0.30
Meeting Stakeholder Needs	0.20
Opportunities for Collaboration	0.15
Leveraging Cultural Practices	0.35
Education and Awareness Campaigns	0.18

Variable	Coefficient
Benefits of Reducing Food Losses	0.22
Willingness to Participate in Programs	0.30

The regression analysis collectively shows that several socio-economic factors have a significant influence on the effectiveness of programs and policies aimed at the reduction of post-harvest food losses in Mukono District. This is demonstrated through the enhancement of knowledge of government programs taking into consideration social and cultural practices, meeting stakeholder needs and leveraging local customs promoting education and community participation, stakeholders can improve the impact and coverage of interventions designed to tackle postharvest food waste.

4.6 Correlation Analysis

The correlation analysis aims to explore the relationships between key variables influencing postharvest food waste in Mukono District, Uganda. This section summarizes the key findings based on the objectives outlined.

Major Variables analyzed.

- **Traditional Practices:** Cultural practices that influence food management and storage.
- **Economic Factors:** Economic conditions affecting food production and waste.
- **Awareness of Programs:** Knowledge of government and community initiatives aimed at reducing food losses.
- **Food Losses:** The quantity of food waste occurring at numerous stages of the food supply chain.

Table 4.14. Summary of Correlation Coefficients

Variable	Traditional Practices	Economic Factors	Awareness of Programs	Food Losses
Traditional Practices	1.00	0.45	0.30	0.60
Economic Factors	0.45	1.00	0.50	0.55
Awareness of Programs	0.30	0.50	1.00	0.40
Food Losses	0.60	0.55	0.40	1.00

The correlation analysis reveals significant relationships between the variables studied:

Traditional Practices and Food Losses: A strong positive correlation of 0.60 demonstrates that an increase in traditional practices that have contributed to food losses has a higher correlation with higher food losses. This shows that cultural practices need to be addressed in interventions aimed at reduction of waste. For example, conservative methods of food storage may need to be modernized to prevent spoilage.

Food Losses and Economic Factors: The correlation value of 0.55 shows that economic factors, like income levels and access to markets, are significant determinants of food losses. The improvement of economic conditions for example increasing farmers' incomes and improving market access, can aid in reduction of food.

Knowledge of Programs and Food Losses: The correlation of 0.40 hints that a higher level of awareness about government programs is associated with low levels of food losses. This shows that increasing awareness and enhancing the effectiveness of such programs can result into better outcomes in reduction of food waste. Education campaigns that inform communities about available resources and strategies can be beneficial.

The correlation analysis shows the interconnectedness of socio-economic factors, conservative practices, and knowledge of programs in influencing post-harvest food losses in Mukono District. Through addressing these relationships, stakeholders can develop targeted interventions to minimize food waste and improve food security in the region. The findings emphasize the need for comprehensive strategies that consider cultural, economic, and educational dimensions to effectively combat postharvest food losses.

CHAPTER FIVE

DISCUSSIONS OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is a comprehensive presentation of the discussion of the key insights unraveled from the regression and correlation analyses, it draws insightful conclusions based on the objectives of the study. It avails detailed recommendations for the address of socio-economic factors that have contributed to post-harvest food losses in Mukono District, Uganda. This discourse delves deeper into the complex relationships between various factors influencing food waste in the region, it integrates the results from both the regression and correlation analyses to provide a holistic comprehension of the issue at hand.

5.2 Discussion of Key Findings

The regression analysis uncovered several critical factors that have had a significant impact on the effectiveness of existing programs and policies aimed at the reduction of post-harvest food losses in Mukono District. These findings highlight the increase in awareness of government programs as indicated by a correlation coefficient of 0.25. This is a crucial first step in the enhancement of the success of these initiatives. If Communities are knowledgeable about the available resources and strategies to combat food waste, there is a high likelihood that they are more likely to engage with and prioritize awareness campaigns as a key component of their investigation strategies, ensuring that the target population is sufficiently informed about the program and its potential benefits. Effective communication channels such as community meetings, local media, and partnerships with trusted communication channels such as community meetings, local media and partnerships with trusted community leaders can be leveraged to reach a wider audience and increase program visibility.

Taking into consideration social and cultural practices indicated by a coefficient of 0.30 plays a vital role in the determination of the effectiveness of post-harvest loss reduction programs. Results from analysis indicate that programs that respect and integrate local customs and norms have a higher likelihood of success. This is because they foster a sense of community ownership and participation. This highlights the significance of culturally sensitive approaches in program

design, as they align interventions with the existing practices and beliefs of the target communities. By engaging with community members, particularly elders and leaders, stakeholders could gain and develop a deeper comprehension of the cultural context and identify ways to integrate local customs into program strategies. This approach does not only enhance the acceptability of the interventions but also ensures that they are custom made to the specific needs and preferences of the community, ultimately resulting into more sustainable outcomes.

Stakeholder involvement has been considered fundamental for the effectiveness of programs aimed at the reduction of food losses. This analysis indicates that fulfilling stakeholder needs (coefficient of 0.20) and providing opportunities for collaboration (coefficient of 0.15) are major factors in the enhancement of program effectiveness. Inclusive planning and execution, as well as partnerships among various stakeholders can result into more comprehensive and effective strategies for the reduction of food losses. Through involving farmers, processors, retailers and community leaders in the design and implementation of programs, stakeholders could ensure that the interventions address the specific challenges and needs of each group. This collaborative approach fosters a sense of shared responsibility and ownership among stakeholders, as they cooperate towards the common objective of minimizing food waste. Furthermore, these partnerships can result into better resource utilization, shared knowledge and a unified approach to solving post-harvest food losses.

Influencing cultural practices (coefficient of 0.35) can significantly enhance outcomes in programs that are aimed at the reduction of food waste. Through the integration of local customs and beliefs into program design, stakeholders could champion greater acceptance and community among community members which ultimately results into more sustainable solutions for the reduction of food losses. This insight unraveled from the analysis emphasizes the value of alignment of interventions with community practices and beliefs. This creates a sense of familiarity and trust among the target population. An example of this is, stakeholders may identify existing cultural practices that promote sharing of food among the target population and including them into education materials or storage infrastructure initiatives through building upon existing cultural strengths, programs can effectively engage communities and drive lasting change in food management behaviors.

Education and awareness campaigns demonstrated by a coefficient of 0.18 play a crucial role in positively affecting behavior change associated with food loss reduction. Through educating households about the best practices in food storage and handling, in addition to the importance of waste reduction, these initiatives could drive significant improvements in food management at the household level. Education campaigns should be tailored to the specific needs and learning preferences of the target audience whilst fully utilizing a variety of communication channels for example demonstrations, workshops, and multimedia resource. The perceived pros of food loss reduction shown the by coefficient of 0.22 serve as a strong motivator for engagement with these programs, as community stakeholders should clearly communicate the economic, social and environmental benefits resulting minimizing food waste reduction. This highlights how these advantages could improve the well-being of households and communities.

The enthusiasm of the community to participate in programs that are aimed at the reduction of food losses (coefficient of 0.30) is a major factor in the determination of their success. The strong interest from the community to engage in these initiatives can be leveraged to enhance program outreach and effectiveness. If community members feel invested in programs and perceive them as valuable resources, there is high likelihood for them to offer support and actively participate in these programs. Therefore, stakeholders should accommodate a sense of ownership and empower the community members. This can be done through encouraging their participation in program planning, implementation and monitoring. This approach not only enhances the relevance and acceptability of the interventions, but it also builds on the capacity of the community to ensure the sustenance of the program over the long term.

Furthermore, the correlation analysis indicates the association between key variables that have influenced post-harvest food losses. The strong positive correlation of 0.60 between conservative practices and food losses suggest that addressing cultural practices is significantly necessary for the reduction of waste. Interventions that are aimed at minimizing food losses must consider and address these cultural practices through education campaigns that are culturally sensitive. In addition, promotion of alternative, sustainable practices and interventions effectively aid in reduction of food waste to a higher degree. This is done while simultaneously respecting the cultural identity of the community.

The correlation coefficient of 0.55 between economic factors and food losses underscores the significance of improving economic conditions such as elevating incomes and enhancing market access to minimize food losses. If households and stakeholders are committed to achieving economic prosperity in the agricultural sector, there is a high likelihood that they will invest in adoption of better storage facilities, and adoption of improved handling practices and exploration of other market channel alternatives. This indicates that interventions aimed the reduction of food losses must incorporate strategies to improve economic outcomes such as provision of access to credit, provision of support for the development of storage infrastructure and facilitation of market linkages. Through addressing the economic constraints that have contributed to food losses, stakeholders can create an enabling environment for the adoption of sustainable food management practices.

A correlation of 0.40 between awareness of programs and food losses indicates that the improvement, awareness of available resources and strategies could result in better outcomes in the reduction of food waste. Education campaigns aimed at sensitizing communities about existing programs and resources could significantly enhance their engagement and participation in these initiatives. Stakeholders should prioritize sensitization efforts utilizing various community networks and mass media to disseminate information about available programs and resources. Through ensuring that communities are well-informed, stakeholders could increase the reach and impact of interventions, ultimately aiding in the reduction of food losses effectively.

5.3 Conclusions

Drawing from the insights unraveled from regression and correlation analysis, multiple inferences can be stated regarding the socio-economic factors that contribute to post-harvest food losses in Mukono District.

Cultural actions serve a significant purpose in influencing food management and storage behaviors, contributing to post-harvest food losses. Interventions that are aimed at the reduction of waste must take into consideration these cultural factors and address them to be effective. There should be engagement of stakeholders with communities to identify and understand the specific conservative practices that contribute to food losses and work co-operatively to escalate alternative, sustainable practices that align with cultural values and beliefs.

Economic conditions. Income levels and market accessibility are vital determinants of post-harvest food losses. The enhancement of economic status could avail households and stakeholders involved in the agricultural sector the capacity to invest in better storage facilities, adopt improved handling practices, and explore alternative market channels. Interventions whose major objective is reduction of food losses should adopt and integrate strategies to enhance economic outcomes that include provision of access to credit, support of the development of storage infrastructure, or facilitation of market linkages.

Awareness of available programs and resources. This is essential for the engagement of communities in efforts to reduce food losses. Improving awareness could result into better participation and outcomes in initiatives that are aimed at minimizing waste. The priority of stakeholders should focus on awareness-raising efforts, utilization of a variety of communication channels to reach a broad audience and ensure that communities have sufficient information regarding available programs and resources.

Stakeholder involvement and collaboration. These are significantly vital for the success of the programs that target post-harvest food losses. Inclusive planning and execution, in conjunction with partnerships among numerous stakeholders could improve the effectiveness of these initiatives. Through involvement of various actors such as farmers, retailers and community leaders in the design and implementation of programs, stakeholders could ensure that the interventions address the specific challenges and needs of each consortium whilst fostering a sense of shared responsibility and ownership.

Leveraging cultural practices and aligning interventions with community norms can foster better acceptance and adoption of food loss reduction strategies. Integrating local customs and beliefs into program design can lead to more sustainable and effective solutions for minimizing food waste. Stakeholders should engage with community members to identify ways in which local practices can be adapted or promoted to improve food management.

Leveraging cultural practices and alignment of interventions with community norms could foster better acceptance and adoption of food loss reduction strategies. The integration of local customs and beliefs into program design could result into minimization of food waste because of more sustainable and effective solutions that emanate from the former.

Education and awareness campaigns. These play a critical purpose in modification of behaviors and promotion of engagement in food loss reduction initiatives. Through the sensitization of households regarding best practices and the significance of food waste reduction, these campaigns could drive significant enhancements in food management. This drives stakeholders to customize education materials to the specific needs and learning preferences of the target audience which elucidates the communication about the benefits of food loss minimization.

The community's willingness to engage in programs with a focal point of reduction of food losses highlights a positive outlook towards collaborative efforts. The active involvement of the community in these initiatives could enhance program outreach and effectiveness which can result into better results in reduction of food waste. This causes stakeholders to create a sense of ownership and empowerment among community members which encourages their participation in program planning, implementation and monitoring.

5.4 Recommendations

Based on the inferences drawn from the study, the following constitute detailed recommendations proposed in the address of the socio-economic factors that have contributed to and contribute to post-harvest food losses in Mukono District:

Mukono District:

Create culturally sensitive education campaigns that trains communities about the best practices in food storage and handling whilst respecting local customs and beliefs. These campaigns should be customized to specific cultural contexts to ensure their effectiveness. Stakeholders should get actively involved with community members, specifically elders and leaders to gain a deeper comprehension of the cultural context and unravel techniques to incorporate local customs into education materials and messaging. Through building upon existing cultural strengths and practices, these campaigns can more effectively promote behavior change and reduction of food losses.

Implement programs that improve economic conditions for households and stakeholders involved in the agricultural sector. This may include initiatives such as providing access to

credit, enhancing market linkages, and supporting the development of storage infrastructure. By addressing the economic barriers that contribute to food losses, these programs can create an enabling environment for the adoption of sustainable food management practices. Stakeholders should collaborate with financial institutions, market associations, and local governments to develop and implement these initiatives, ensuring that they are accessible and relevant to the target population.

Implement programs that enhance economic conditions for households and stakeholders involved in the agricultural sector. This might include initiatives such as provision of access to credit, improving market linkages and supporting the development of storage infrastructure. Through the address of the economic constraints that have contributed to food losses, these programs can create a supportive environment for the adoption of sustainable food management practices. Stakeholders should take the initiative to collaborate with financial institutions, market associations, and local governments to develop and implement these initiatives that ensures that they are accessible and relevant to the target population.

Increase knowledge of available government programs and resources aimed at reduction of post-food harvest losses. This could be achieved through targeted outreach efforts for example community meetings, radio broadcasts, and partnerships with local leaders. Stakeholders should utilize various communication channels to reach a wide audience whilst ensuring that communities are knowledgeable about the available programs and their potential benefits. Through enhancing awareness, stakeholders can enhance engagement and participation in these initiatives resulting into better outcomes in reduction of food waste.

Foster stakeholder collaboration by creating platforms that accommodate frequent dialogue and dissemination of knowledge among farmers, processors, retailers, and policymakers. This can result into the development of more comprehensive and effective strategies for the reduction of food losses. These platforms should provide opportunities for stakeholders to share their experiences, challenges, and best practices whilst facilitating the development of partnerships and joint initiatives. Through the promotion of collaboration, stakeholders can leverage their collective knowledge and resources to develop more effective and sustainable solutions for minimization of food waste.

Amalgamate cultural practices into program design through engagement with community leaders and elders to identify and find ways in which local customs can be leveraged to improve food management. This may involve adaptation of conservative storage methods or incorporation of cultural beliefs into education materials. Stakeholders should work closely with community members to ensure that the incorporation of cultural practices is performed in a respectful and appropriate manner, whilst also promoting sustainable food management practices. Through alignment of interventions with community norms and values, stakeholders could enhance the acceptability and effectiveness of their programs.

Conduct regular monitoring and evaluation of programs that are aimed at the reduction of post-harvest food losses to analyze their effectiveness and make necessary adjustments based on feedback from stakeholders. Monitoring and evaluation should be an on-going process with stakeholders frequently involved in the data collection on program outputs, outcomes, and impact. This information should be used to identify areas for improvement, make necessary adjustments to program strategies, and ensure that interventions remain relevant and effective over time. Stakeholders should also share monitoring and evaluation insights with communities, fostering transparency and accountability in program implementation.

Create partnerships with research and academic institutions such as universities to conduct further studies on the socio-economic factors that have influenced post-harvest food losses in Uganda. This could result in more targeted and evidence-based interventions. Through collaborating with academic and research institutions, stakeholders could gain access to new findings, tools and methodologies for studying post-harvest food losses. These partnerships could provide opportunities for capacity building, training and knowledge exchange, which ensures that stakeholders have the necessary skills and resources to develop and implement effective interventions.

Advocate for policy reforms that support the development of storage infrastructure, enhance market access, and provide incentives for adopting better food management practices. Stakeholders should engage with policymakers at the local and national levels to ensure that the issue of postharvest food losses is prioritized on the policy agenda. This may involve advocating for increased investment in storage infrastructure, the development of market information systems, or the provision of subsidies or tax incentives for farmers who adopt sustainable food

management practices. By influencing policy, stakeholders can create an enabling environment for reducing food losses and enhancing food security in the long term.

Advocate for policy reforms that support the creation of storage infrastructure, enhance market access, and provide incentives for the adoption of better food management practices. Stakeholders should therefore have engagements with policy makers at the local and national levels to ensure that the issue of post-harvest food losses is prioritized on the policy agenda which may involve advocating for increased investment in storage infrastructure, and the development of market information systems, or the provision of subsidies and tax incentives for farmers who adopt sustainable food management practices. Through influencing policy, stakeholders can create an enabling environment for reduction of food losses and enhancement of food security over the long term.

5.5 Limitations of the Study

While this study provides valuable insights into the socio-economic factors that have contributed to post-harvest food losses in Mukono District, it is crucially significant to acknowledge its constraints.

The study was conducted in a specific geographical area. This imposed a limitation on the generalizability of the insights to other regions in Uganda and beyond. The socio-economic and cultural context of Mukono District may differ from other parts of the country, and consequently the effectiveness of interventions may vary based on the local conditions.

The data collected relied on self-reported information from respondents, which may be subject to bias or inaccuracies. The perception of answers provided by respondents could be viewed as socially desirable or in alignment with their own experiences and perceptions, rather than objective reality.

The focus of the study was limited to a set of socio-economic factors, and other variables not considered in this research may have also influenced post-harvest food losses. Factors including but not limited to gender dynamics, access to technology, or the role of the government extension services weren't explicitly examined in the study.

The study didn't incorporate objective measures of post-harvest food losses that include direct observations or quantitative assessments, to complement self-reported data. The study relied solely on self-reported data which may not avail a complete picture of the extent and nature of food losses in the region.

The study didn't explore the role of gender dynamics in influencing post-harvest food loss behaviors and how effective were the interventions that targeted specific gender groups. The role and responsibilities of different genders in food production, storage and management might have significant implications for the success of the interventions.

5.6 Areas for Future Research

Drawing on the insights from this study, the limitations of this study warrant a need for further comprehension of post-harvest food losses in Uganda. Subsequent areas for future research are identified below:

Expand the geographical scope of the study to include other districts or regions in Uganda to acquire a more comprehensive comprehension of the issue. This would allow for the comparisons between different socio-economic and cultural contexts which provide insights into how effective the interventions in various settings could be.

Incorporating objective measures of post-harvest food losses including but not limited to direct observations or quantitative assessments to complement self-reported data, conducting of surveys using visual aids to provide estimation of losses or collection of data on the quantities and qualities of food produced and marketed could be implemented as methods to ascertain accuracy and reliable picture of the extent and nature of food losses.

Investigate the role of gender dynamics in the influence of post-harvest food loss behaviors and the effectiveness of interventions that target specific gender groups. Examination of the division of labor in food production and management, as well as the decision-making processes within households and communities and comprehension of gender roles and power dynamics in shaping food loss behaviors can inform the design of more inclusive and effective interventions.

Exploration of potential technological innovations in the reduction of post-harvest food losses such as the use of solar-powered storage facilities, mobile applications for market

information, or precision farming techniques. Examining the feasibility, acceptability and impact of these technologies could provide insights into how they can be effectively integrated into existing food management systems.

Examine the long-term sustainability and impact of programs aimed at the reduction of post-harvest food losses to assess how effective they are in the achievement of permanent change. This could involve conducting longitudinal studies that track changes in food loss behaviors and outcomes over the long term. A comprehension of these factors that contribute to the sustainability of interventions is pivotal in provision of informing the design of more effective and more durable programs.

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APPENDIX 1: RESEARCH QUESTIONNAIRE

Dear Sir/Madam,

I am a Student at Uganda Christian University pursuing a..... I am conducting research titled “WHAT ARE THE SOCIAL ECONOMIC FACTORS THAT INFLUENCE FOOD WASTE IN UGANDA A CASE STUDY OF MUKONO, Uganda as a requirement for completing this program. In your official position, you have useful information needed to accomplish this research successfully. You are thus invited to provide this information by answering the questions in this instrument as honestly as possible. The information will be used for purely academic purposes, treated confidentially and will not be used to victimize you or bring your name or company into disrepute. Your name is not required. Your participation is voluntary, and you can withdraw when the need to do so arises.

Please respond by ticking (✓) in the table cell that corresponds to the option that best suits you

Thank you in advance for your kind cooperation.

SECTION A,

Demographic Background

Demographic Variable	Response Options	Response
Age	18-25	
	26-35	
	36-45	
	46-55	
	56 and above	
Gender	Male	
	Female	
	Other	

Education Level	Primary	
	Secondary	
	Tertiary	
Occupation	Farmer	
	Processor	
	Retailer	
	Household	
Household Size	1-3	
	4-6	
	7-9	
	10 and above	
Annual Household Income	Less than 5 million UGX	
	5-10 million UGX	
	10-15 million UGX	
	More than 15 million UGX	
Land Ownership	Own	
	Rent	
	Communal	
Years of Experience	Less than 5	
	5-10	
	11-15	
	More than 15	
Access to Extension Services	Yes	

	No	
Membership in Farmer Groups	Yes	
	No	

Please indicate your level of agreement with the following statements regarding postharvest food losses in Mukono using the scale provided:

Questions on the Variables of the Study, read each statement and use the following scale to tick (✓) in the table cell that corresponds to the option that best suits you here are the Likert scale Strongly Disagree (1), Disagree (2), Neither Disagree nor Agree (3), Agree (4) and Strongly Agree (5)

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
To investigate the social and cultural practices of households that lead to postharvest food losses in Mukono.					

1. Traditional practices in my household contribute to postharvest food losses.					
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<p>3. Cultural beliefs regarding food handling influence postharvest food loss practices in my household.</p>					
<p>4. Gender roles in my household affect the way food is handled and stored after harvesting.</p>					
<p>5. Social events and celebrations in my community contribute to increased postharvest food losses.</p>					

<p>6. Inadequate food storage methods in my household lead to significant postharvest food losses.</p>					
<p>7. Sharing food with extended family members contributes to postharvest food losses in my household.</p>					
<p>8. Traditional beliefs about food preservation influence the way my household handles food after harvesting.</p>					

<p>9. Postharvest food losses in my household are mainly due to social and cultural practices.</p>					
<p>10. I am willing to make changes to reduce postharvest food losses while maintaining important social and cultural practices.</p>					

<p>To analyze the economic factors, including income levels, food prices, market accessibility, and infrastructure, that influence postharvest food loss behaviors among households, farmers, food processors, and retailers in Mukono.</p>					
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<p>11. My household's main source of income affects our ability to invest in proper food storage and handling practices.</p>					
<p>12. Fluctuations in food prices influence my household's decisions regarding food storage and consumption.</p>					

<p>13. Limited access to markets for selling surplus food contributes to postharvest food losses in my household or community.</p>					
<p>14. Inadequate infrastructure, such as roads and storage facilities, leads to increased postharvest food losses in my community.</p>					

<p>15. Lack of access to credit or financial services hinders my ability to invest in technologies or practices to reduce food losses.</p>					
<p>16. Economic status and income levels in my community influence postharvest food loss behaviors among households, farmers, food processors, and retailers.</p>					

<p>17. Economic challenges are the main reason for postharvest food losses in my household or community.</p>					
<p>18. Improving economic factors, such as income levels and market accessibility, could help reduce postharvest food losses in my community.</p>					

<p>19. My household's income level affects our ability to invest in proper food storage infrastructure.</p>					
<p>20. Economic factors have a greater influence on postharvest food losses than social and cultural practices in my community.</p>					

<p>To evaluate the effectiveness of existing programs and policies aimed at reducing postharvest food losses in Mukono, while identifying key challenges and opportunities for improvement based on the social and cultural practices of various stakeholders, including households, farmers, food processors, and retailers.</p>					
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<p>21. I am aware of government programs or policies aimed at reducing postharvest food losses in my area.</p>					
<p>22. Existing programs and policies effectively address postharvest food losses in my community.</p>					

<p>23. Social and cultural practices are adequately considered in the design of programs and policies to reduce postharvest food losses in Mukono.</p>					
<p>24. Existing programs and policies meet the needs and concerns of various stakeholders, including households, farmers, food processors, and retailers.</p>					

<p>25. There are opportunities for collaboration among different stakeholders to develop more effective strategies for reducing postharvest food losses.</p>					
<p>26. The unique social and cultural practices of different communities in Mukono can be leveraged to promote better food handling and storage practices.</p>					

<p>27. Education and awareness campaigns can help change social and cultural norms that contribute to postharvest food losses.</p>					
<p>28. Reducing postharvest food losses in Mukono can lead to significant benefits for my household or community.</p>					

<p>29. Existing programs and policies should be improved to better address the needs and concerns of various stakeholders in Mukono.</p>					
<p>30. I am willing to participate in existing or future programs and policies aimed at reducing postharvest food losses in my community.</p>					

Open-Ended Questions

Please provide your responses to the following open-ended questions related to postharvest food losses in Mukono:

- i. What specific social and cultural practices do you believe contribute most to postharvest food losses in your household or community?

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- ii. In your opinion, what are the most significant economic challenges that lead to postharvest food losses in Mukono?.....

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.....

- iii. What improvements would you suggest for existing programs and policies aimed at reducing postharvest food losses in your area?

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.....
.....
.....

- iv. How do you think community involvement can be enhanced to address postharvest food losses effectively?

.....
.....

- v. What additional resources or support do you believe are necessary to help households reduce postharvest food losses in Mukono

.....
.....
.....

THANK YOU