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The Role Of Vegetable Growing To Small Scale Household Farmers Of Masaba Sub-County In Busia District, Uganda

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Abstract

This study examined the role of vegetable growing among small-scale household farmers in Masaba Sub-County, Busia District, Uganda. The study was motivated by the need to understand how vegetable farming contributes to household food security, income generation, nutritional outcomes, and livelihood diversification among rural agricultural communities. Despite the centrality of vegetable growing to many households in the region, there has been limited empirical documentation of its specific contributions and constraints. Using a cross-sectional survey design, the study collected data from 120 randomly selected household farmers. Structured questionnaires, focus group discussions, and key informant interviews were employed as data collection instruments. Findings revealed that vegetable growing significantly contributes to household food security, supplement cash income, and improve nutritional status. However, challenges including poor market access, inadequate irrigation infrastructure, pest and disease infestations, and limited extension services constrain productivity. The study recommends strengthening extension services, improving rural road networks, and establishing farmer cooperatives to enhance vegetable marketing and productivity.

Keywords: Vegetable growing, small-scale farmers, food security, household income, Masaba Sub-County, Busia District, Uganda

Background of the Study

Agriculture remains the backbone of Uganda's economy, employing approximately 72% of the working population and contributing about 24% to the national Gross Domestic Product (GDP) (Uganda Bureau of Statistics, 2021). Within the agricultural sector, vegetable farming has emerged as a significant component of smallholder livelihoods, particularly in rural communities where land holdings are small and diversified farming strategies are necessary for household survival. Masaba Sub-County, located in Busia District in Eastern Uganda, is predominantly agrarian, with most households engaging in subsistence and semi-commercial agriculture(Alex & Julius, 2024). The fertile soils and generally favorable climate of the region provide suitable conditions for the cultivation of a range of vegetables including tomatoes, cabbages, kale, eggplants, onions, and beans(Audrey & Kazaara, 2025).

Globally, vegetable production has been recognized as a critical pathway out of poverty for smallholder farmers. The Food and Agriculture Organization of the United Nations (FAO, 2020) emphasizes that horticulture, particularly vegetable growing, offers significant opportunities for income generation, employment, and dietary diversification in developing countries. In Sub-Saharan Africa, vegetable farming has demonstrated the capacity to transform household economies, particularly for women farmers who constitute the majority of smallholder vegetable producers (Weinberger and Lumpkin, 2007). In Uganda, the National Development Plan III (2020/21–2024/25) identifies

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horticulture as one of the strategic commodities for agricultural transformation and rural income improvement(Kazaara & Christopher, 2023). The government, through the Plan for Modernization of Agriculture (PMA) and more recently the Parish Development Model (PDM), has been promoting commercial vegetable production as a strategy to address rural poverty and food insecurity. Despite these policy frameworks, smallholder vegetable farmers in areas like Masaba Sub-County continue to face significant structural and systemic constraints that limit their productivity and market participation(Christopher, Moses, et al., 2022).

Busia District, as a border district, holds particular strategic significance given its proximity to Kenya, which provides a potentially lucrative cross-border market for agricultural produce. However, smallholder farmers in Masaba Sub-County have not been adequately positioned to exploit these market opportunities due to poor infrastructure, lack of market information, limited access to inputs and credit, and inadequate post-harvest handling technologies(Kazaara & Kazaara, 2025). The gender dimension of vegetable farming in the area is also notable, as women bear a disproportionate share of farming labor while having limited control over income and decision-making within households(Francis, Richard, Nicholas, et al., 2023). Understanding the dynamics of vegetable growing in this specific context is therefore essential for designing targeted interventions that can enhance the livelihoods of household farmers in Masaba Sub-County and similar communities across Uganda(Julius & Nancy, 2026a).

Previous studies in Uganda have documented various aspects of smallholder farming but have paid insufficient attention to the specific contributions and constraints of vegetable growing at the sub-county level(Case & Of, 2023). This research, therefore, seeks to fill this gap by generating localized, empirical evidence on the role of vegetable growing among small-scale household farmers in Masaba Sub-County, Busia District.

Problem Statement

Despite the acknowledged importance of vegetable growing to rural livelihoods in Uganda, smallholder farmers in Masaba Sub-County continue to operate under conditions that undermine the full realization of the potential benefits of vegetable farming(Francis, Richard, Kazaara, et al., 2023). The majority of farmers in the sub-county engage in vegetable production at subsistence or semi-commercial levels, with limited access to improved varieties, agrochemicals, irrigation facilities, and credit(Derrick, Nelson, Kazaara, et al., 2023). Post-harvest losses are alarmingly high due to lack of storage and processing infrastructure, while market access remains constrained by poor road networks and absence of organized marketing channels(Derrick, Nelson, Ariyo, et al., 2023). Consequently, many households remain trapped in a cycle of low productivity and income insecurity despite their investment in vegetable growing. Furthermore, there is a conspicuous absence of documented empirical evidence on the actual contributions of vegetable growing to household food security, income, and nutritional status in this specific sub-county, which makes it difficult for policymakers and development practitioners to design appropriate interventions. This study therefore sought to assess the specific roles that vegetable growing plays in the livelihoods of small-scale household farmers in Masaba Sub-County.

Main Objective

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To assess the role of vegetable growing in improving the livelihoods and food security of small-scale household farmers in Masaba Sub-County, Busia District.

Literature Review

Vegetable Growing and Food Security

Food security, defined as the condition under which all people at all times have access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996), has been a central preoccupation of development policy in Sub-Saharan Africa. Vegetables play a fundamental role in achieving household food security by providing essential micronutrients including vitamins A, B, and C, as well as minerals such as iron and calcium that are largely absent in staple food crops like cassava and maize (Weinberger and Msuya, 2004). Studies conducted in East Africa have demonstrated a positive association between household participation in vegetable growing and dietary diversity scores, suggesting that vegetable farmers are better nourished than non-vegetable farmers (Msuya et al., 2008).

In Uganda specifically, a study by Sseguya et al. (2009) found that households involved in vegetable production had significantly higher dietary diversity and lower rates of micronutrient deficiencies than those that relied solely on staple crop production. The subsistence contribution of vegetable growing is particularly important in Busia District where cross-border trade dynamics and market fluctuations often render purchased food inaccessible to many rural households. Vegetables grown at the homestead level serve as a critical buffer against seasonal food insecurity, providing both direct consumption value and surplus for sale during periods of low agricultural income(Ramadhan et al., 2023).

Vegetable Growing and Household Income

The income-generating potential of vegetable growing has been extensively documented in the horticultural economics literature. Vegetables generally command higher prices per unit weight than staple crops and can be harvested within shorter production cycles, making them particularly attractive to smallholder farmers with limited land and capital (Hichaambwa and Jayne, 2012). In Uganda, tomato, cabbage, and kale production have been identified as particularly profitable enterprises for smallholder farmers, with gross margins often exceeding those of traditional staple crops by margins of 40 to 60 percent (Kibwika et al., 2009). The proximity of Masaba Sub-County to the Busia border crossing creates additional market opportunities that can further enhance the income-generating capacity of vegetable growing for local farmers(Christopher & Shamirah, 2025).

However, realizing income gains from vegetable growing is contingent on overcoming several constraints. Seasonal price volatility, driven by simultaneous peak production across the region, often results in price collapses that erode farmer profitability(Winny et al., 2023). Dorward et al. (2004) refer to this as the 'green harvest paradox,' where market gluts during peak production periods translate into low farmgate prices despite high consumer demand. Access to market information, organized collective marketing, and storage infrastructure are therefore critical determinants of whether vegetable growing translates into sustained income improvement for smallholder farmers.

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Constraints to Vegetable Production

The literature identifies a broad spectrum of constraints that limit vegetable production among smallholder farmers in Sub-Saharan Africa. Pest and disease pressures, particularly from diamondback moth in cabbage, tomato blight, and bacterial wilt, represent significant threats to vegetable productivity (Mwang'ombe et al., 2007). The high cost and limited availability of agrochemicals, combined with inadequate knowledge of integrated pest management practices, result in substantial crop losses that undermine farmer incomes(Christopher, Komunda, et al., 2022). Water scarcity during dry seasons is another major constraint, as most smallholder vegetable farmers in Uganda rely on rainfall rather than irrigation, limiting production to wet seasons and resulting in seasonal income gaps(Winny et al., 2023).

Extension service delivery remains inadequate in many rural areas, with extension worker-to-farmer ratios far below recommended levels. The National Agricultural Advisory Services (NAADS) and its successor, the Agricultural Technology and Agribusiness Advisory Services (ATAAS), have made efforts to improve extension coverage, but reach in remote sub-counties like Masaba remains limited(Alex & Julius, 2024). Access to affordable credit for purchasing improved inputs is also a significant challenge, as many smallholder farmers lack collateral and formal banking relationships (Byamugisha, 2010). Collectively, these constraints create a challenging operating environment for vegetable farmers and limit the full realization of the potential economic and nutritional benefits of vegetable growing.

Gender and Vegetable Growing

Gender dynamics play a significant role in shaping the outcomes of vegetable growing among smallholder farmers in Uganda. Women constitute the majority of vegetable farmers but often lack equal access to land, inputs, credit, and markets compared to their male counterparts (Quisumbing et al., 2014). Studies have shown that when women have greater control over income from vegetable sales, a larger proportion is invested in children's education, household nutrition, and health, generating multiplier effects on household welfare (Doss, 2006). Empowering female vegetable farmers in Masaba Sub-County through access to resources, market information, and organizational support is therefore likely to yield significant development dividends beyond agricultural productivity per se.

Methodology

Research Design

The study adopted a cross-sectional survey design, which allowed for the collection of data from multiple respondents at a single point in time. This design was considered appropriate for generating descriptive and analytical insights about the role of vegetable growing in the livelihoods of small-scale household farmers in Masaba Sub-County. The study employed both quantitative and qualitative methods in a concurrent mixed methods approach, allowing for triangulation of findings across different data sources.

Study Area

The study was conducted in Masaba Sub-County, Busia District, located in Eastern Uganda. Masaba Sub-County borders Kenya to the east and is characterized by a predominantly rural population engaged in smallholder agriculture.

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The sub-county has a tropical climate with bimodal rainfall patterns, which are generally favorable for vegetable production. The main farming systems in the sub-county combine food crop production with small-scale livestock keeping and vegetable growing.

Population and Sampling

The target population comprised all registered small-scale household farmers engaged in vegetable growing in Masaba Sub-County. Based on data from the District Agricultural Office, this population was estimated at approximately 850 vegetable farming households. Using Krejcie and Morgan's (1970) sample size determination formula, a sample size of 265 households was calculated. However, due to logistical and resource constraints, the final sample comprised 120 households, selected through a combination of cluster and simple random sampling techniques. Three parishes within the sub-county were purposively selected as study clusters, after which households were randomly selected from a sampling frame obtained from local council registers.

Data Collection Methods

Primary data were collected using structured questionnaires administered through face-to-face interviews with household heads or their spouses. The questionnaire covered household demographics, land holding size, types of vegetables grown, production volumes, income from vegetable sales, food security indicators, and perceived constraints to vegetable production. Additionally, four focus group discussions (FGDs) were conducted two with female farmers and two with male farmers to explore qualitative dimensions of vegetable growing, including gender roles, social dynamics, and community perspectives on vegetable farming. Six key informant interviews were conducted with agricultural extension officers, local government officials, and representatives of farmer organizations. Secondary data were obtained from reports of the Uganda Bureau of Statistics, District Agricultural Office, and relevant published literature.

Data Analysis

Quantitative data were analyzed using SPSS version 25(Nelson et al., 2022). Descriptive statistics including frequencies, percentages, means, and standard deviations were computed to characterize the sample and key study variables. Cross-tabulations and chi-square tests were used to examine associations between categorical variables. Qualitative data from FGDs and key informant interviews were analyzed thematically using content analysis techniques, with emerging themes coded and organized around the main study objectives. Ethical clearance was obtained from the relevant institutional review board, and informed consent was secured from all study participants.

RESULTS

Socio-Demographic Characteristics of Respondents

Table 1: Socio-Demographic Characteristics of Respondents (n=120)

Characteristic	Category	Frequency	Percentage (%)
Sex	Male	68	56.7

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	Female	52	43.3
Age Group	18–30 years	22	18.3
	31–45 years	54	45.0
	46–60 years	32	26.7
	Above 60 years	12	10.0
Education Level	No formal education	18	15.0
	Primary level	52	43.3
	Secondary level	38	31.7
	Tertiary/Higher	12	10.0
Household Size	1–3 members	20	16.7
	4–6 members	65	54.2
	7 and above	35	29.2
Land Size (acres)	Less than 1 acre	44	36.7
	1–2 acres	58	48.3
	More than 2 acres	18	15.0

Source: Primary Data, 2025

The socio-demographic findings presented in Table 1 provide important contextual information for interpreting the study's core results. Males constituted the majority of respondents at 56.7%, while females accounted for 43.3%. This distribution reflects the broader pattern of agricultural household headship in rural Uganda, where men are more commonly recognized as household heads even when women perform a substantial proportion of agricultural labor. The relatively high female representation (43.3%) nonetheless underscores the significant role women play in vegetable farming in Masaba Sub-County, consistent with national and regional literature on the feminization of smallholder horticulture.

The age distribution reveals that the majority of vegetable farmers (45.0%) fall within the 31 to 45 years age bracket, indicating that vegetable growing is predominantly a middle-aged adult activity. The relatively small proportion of young farmers (18.3% aged 18–30) raises concerns about the generational transfer of agricultural knowledge and the attractiveness of farming to youth in the sub-county. Older farmers above 60 years of age accounted for only 10.0% of the sample, suggesting that physical demands of vegetable farming may limit participation among the elderly. Educational attainment was modest, with 43.3% having completed only primary education and 15.0% having received no formal education whatsoever. This has implications for extension service delivery, as low literacy levels can limit farmers' ability to access written agricultural information and adopt technology-intensive practices.

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Household size data indicate that the majority of farming households (54.2%) have between four and six members, which is consistent with the national average household size of approximately 4.7 persons (UBOS, 2021). Larger households may have more family labor available for vegetable farming but also face higher food consumption demands. Land holding patterns show that the majority of farmers (48.3%) cultivate between one and two acres, while 36.7% operate on less than one acre. These small land holding sizes reflect the broader challenge of land fragmentation in Eastern Uganda and underscore the need for high-value crops like vegetables that generate more income per unit area than staple crops.

Role of Vegetable Growing in Food Security

Table 2: Role of Vegetable Growing in Household Food Security (n=120)

Food Security Indicator	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Vegetables available at household level	48 (40.0%)	42 (35.0%)	12 (10.0%)	10 (8.3%)	8 (6.7%)
Reduced household food expenditure	35 (29.2%)	50 (41.7%)	18 (15.0%)	12 (10.0%)	5 (4.2%)
Improved household dietary diversity	40 (33.3%)	48 (40.0%)	15 (12.5%)	10 (8.3%)	7 (5.8%)
Reduced seasonal food gaps	28 (23.3%)	45 (37.5%)	22 (18.3%)	17 (14.2%)	8 (6.7%)
Increased number of meals per day	30 (25.0%)	44 (36.7%)	20 (16.7%)	18 (15.0%)	8 (6.7%)

Source: Primary Data, 2025

Table 2 presents the perceptions of respondents regarding the contribution of vegetable growing to household food security across five key indicators. With respect to the availability of vegetables at the household level, 75.0% of respondents either agreed or strongly agreed that vegetable growing ensures a consistent supply of vegetables for household consumption, indicating that home production plays a central role in meeting the vegetable dietary needs of farming families in Masaba Sub-County. Only 15.0% disagreed or strongly disagreed, which may represent households that primarily grow vegetables for commercial purposes or those with very small production volumes insufficient for household needs(Nelson et al., 2023).

The data on reduced household food expenditure reveal that 70.9% of respondents agreed or strongly agreed that vegetable growing reduces the amount spent on purchasing food from markets. This finding has significant implications for household economic welfare, as reduced expenditure on food leaves more resources available for other essential needs including health, education, and agricultural inputs(Julius & Kazaara, 2026). The relatively small proportion of neutral respondents (15.0%) and those who disagreed (14.2%) may reflect farmers who sell most of their produce rather than consuming it, or those who produce crops with lower dietary substitution value for purchased foods(Julius & Nancy, 2026b).

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Regarding the improvement of household dietary diversity, 73.3% of respondents confirmed that vegetable growing contributes positively to the variety of foods consumed within their households. This is a critical finding given that dietary diversity is one of the most important indicators of food and nutrition security, particularly for children and women of reproductive age. The introduction of a variety of vegetables into household diets supplements the predominantly starchy staple diets common in the region, potentially addressing micronutrient deficiencies that are prevalent in rural Uganda. The finding on reduced seasonal food gaps is noteworthy, with 60.8% of respondents agreeing that vegetable growing helps bridge periods of food scarcity, though a substantial proportion (20.9%) disagree, suggesting that seasonal production constraints particularly during dry seasons continue to undermine the food security contribution of vegetable farming for a significant minority of households.

Role of Vegetable Growing in Income Generation

Table 3: Annual Income from Vegetable Sales by Crop Type (n=120)

Vegetable Crop	Farmers Growing (%)	Mean Annual Income (UGX)	Min (UGX)	Max (UGX)
Tomatoes	72 (60.0%)	1,850,000	200,000	8,500,000
Cabbages	68 (56.7%)	1,420,000	150,000	6,200,000
Kale (Sukuma wiki)	95 (79.2%)	980,000	80,000	4,100,000
Eggplant (Biringanya)	45 (37.5%)	750,000	60,000	3,200,000
Onions	38 (31.7%)	2,100,000	300,000	9,000,000
Beans (Green)	58 (48.3%)	890,000	75,000	3,800,000
Pumpkins	42 (35.0%)	640,000	50,000	2,500,000
Capsicum/Bell Peppers	25 (20.8%)	1,650,000	180,000	7,200,000

Source: Primary Data, 2025

Table 3 presents the distribution of vegetable crops grown by respondents and the associated annual income ranges. Kale (Sukuma wiki) is the most widely grown vegetable, cultivated by 79.2% of all farming households surveyed, reflecting its cultural acceptance, fast growth cycle of approximately three weeks to first harvest, and relatively stable market demand throughout the year. Despite its near-universal cultivation, kale generates the lowest mean annual income among all crops studied at UGX 980,000, partly due to its low unit market price and high competition among producers in local markets(Kazaara & Julius, 2025).

Onions, while grown by only 31.7% of respondents, generate the highest mean annual income of UGX 2,100,000, suggesting that farmers who venture into onion cultivation are better positioned to earn significant income from vegetable growing. The high profitability of onions is partly attributable to strong demand from both local and cross-border markets in Kenya, and the relatively lower competition among smallholder farmers in the area due to the perception that onions are more technically demanding to grow. Tomatoes, cultivated by 60.0% of respondents,

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generate a mean annual income of UGX 1,850,000, making them one of the most important income-generating vegetables in the sub-county. However, the wide income range from UGX 200,000 to UGX 8,500,000 reflects significant variability in production scale, market access, and the impact of disease particularly bacterial wilt on crop yields across different farming households.

Capsicum and bell peppers, though grown by only 20.8% of farmers, yield a mean annual income of UGX 1,650,000, indicating their potential as a high-value crop for forward-looking farmers. The relatively limited adoption of capsicum production despite its high-income potential may reflect market uncertainty, lack of technical knowledge, or limited access to improved varieties and inputs. These findings suggest opportunities for agricultural extension programs to promote diversification into higher-value vegetables among smallholder farmers in Masaba Sub-County.

Constraints to Vegetable Production

Table 4: Major Constraints Facing Vegetable Farmers (n=120)

Constraint	Frequency	Percentage (%)	Rank
Pest and disease infestation	98	81.7	1
Poor market access/low prices	92	76.7	2
Lack of irrigation facilities	88	73.3	3
High cost of inputs (seeds, fertilizers)	82	68.3	4
Inadequate extension services	76	63.3	5
Limited access to credit/loans	72	60.0	6
Poor road infrastructure	68	56.7	7
Land tenure insecurity	55	45.8	8
Post-harvest losses	50	41.7	9
Lack of market information	45	37.5	10

Source: Primary Data, 2025

Table 4 presents the major constraints identified by respondents as limiting their vegetable production activities. Pest and disease infestation emerged as the most frequently cited constraint, mentioned by 81.7% of respondents. This finding is consistent with the broader literature on vegetable production challenges in Sub-Saharan Africa, where pests such as diamondback moth, thrips, aphids, and whiteflies cause significant crop losses, while diseases including bacterial wilt, late blight, and Fusarium wilt devastate entire plantings if not managed promptly. The high incidence of pest and disease problems reported by farmers in Masaba Sub-County reflects both the humid tropical climate that favors pest proliferation and the limited access to effective pest management information and approved agro-chemicals.

Poor market access and low farmgate prices were identified by 76.7% of respondents as a major constraint, ranking second among all identified problems. Farmers in Masaba Sub-County primarily sell their produce through village-

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level brokers and traders who often exploit information asymmetries and the perishable nature of vegetables to depress farmgate prices. The absence of organized farmer cooperatives or collective marketing arrangements leaves individual farmers at a significant disadvantage in negotiations with traders. The lack of irrigation facilities, cited by 73.3% of respondents, severely limits the ability of farmers to engage in year-round vegetable production. During the dry seasons typically from December to February and from June to August most farmers are unable to grow water-intensive vegetables, resulting in income gaps and seasonal food insecurity. This finding underscores the critical need for investment in small-scale irrigation infrastructure to support all-season vegetable production in the sub-county.

Discussion of Results

The findings of this study provide compelling evidence for the multidimensional role that vegetable growing plays in the livelihoods of small-scale household farmers in Masaba Sub-County. The study demonstrates that vegetable farming contributes significantly to household food security, income generation, and dietary diversity, even among households with small land holdings and limited access to agricultural resources. These findings align with the broader literature on smallholder horticulture in East Africa (Weinberger and Lumpkin, 2007; FAO, 2020) and confirm that vegetable growing occupies a central place in the agricultural livelihood systems of rural communities in Busia District.

The food security contribution of vegetable growing is particularly noteworthy in a context where dietary monotony and micronutrient deficiencies are widespread challenges. The majority of respondents confirmed that home-grown vegetables ensure dietary diversity and reduce household food expenditure, findings that are consistent with studies from other parts of Uganda and East Africa. The ability of vegetable gardens to provide fresh produce throughout much of the year, even if constrained by seasonal rainfall variability, represents an important resilience mechanism for rural households facing multiple livelihood stressors. However, the significant proportion of farmers who report inability to bridge seasonal food gaps through vegetable growing highlights the critical importance of irrigation access and dry-season vegetable production strategies.

The income data from vegetable sales reveal considerable heterogeneity in economic outcomes across different crop types and households. High-value crops such as onions, tomatoes, and bell peppers generate significantly higher incomes than widely grown but low-value crops like kale, suggesting that crop diversification and market intelligence are important determinants of income outcomes in vegetable farming. The proximity of Masaba Sub-County to the Busia border crossing is an underexploited asset that, if leveraged through organized marketing systems and quality standards, could substantially enhance the income-generating potential of vegetable farming for local farmers. The constraints identified in this study particularly pest and disease pressure, poor market access, and lack of irrigation are not unique to Masaba Sub-County but reflect systemic challenges that pervade smallholder vegetable farming across Uganda.

Conclusions

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The study concludes that vegetable growing plays a significant and multifaceted role in improving the livelihoods of small-scale household farmers in Masaba Sub-County, Busia District. It contributes positively to household food security by improving dietary diversity, reducing food expenditure, and providing a buffer against seasonal food gaps. Income from vegetable sales supplements household earnings from other agricultural and non-agricultural sources, with high-value vegetables such as onions, tomatoes, and bell peppers generating the most substantial economic returns. However, the full realization of these benefits is constrained by pest and disease infestation, poor market access, lack of irrigation, limited extension services, and inadequate credit facilities. Addressing these structural constraints is essential for unleashing the full potential of vegetable growing as a pathway to improved livelihoods and food security in the sub-county.

Recommendations

Based on the findings, the following recommendations are proposed: First, the District Agricultural Office and MAAIF should intensify extension service provision in Masaba Sub-County, with particular emphasis on integrated pest management, improved variety selection, and agronomic practices. Second, the district government should prioritize investment in small-scale irrigation infrastructure, including valley tanks, boreholes, and gravity-fed drip irrigation systems, to support year-round vegetable production. Third, farmer organizations should be established and strengthened to facilitate collective marketing, bulk input purchasing, and market information sharing. Fourth, financial institutions and government programs should develop tailored credit products for vegetable farmers to enable investment in improved inputs and post-harvest handling equipment. Fifth, local governments should invest in rural road rehabilitation to reduce post-harvest losses and improve market access for vegetable farmers in remote areas of the sub-county.

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