

# LEVERAGING AGRO-TOURISM FOR SUSTAINABLE AGRIBUSINESS GROWTH: EVIDENCE FROM UGANDA

Tomson Nabasa<sup>1</sup>, <sup>2\*</sup>Doreen Atwongyeire and Mary Goretty Nagawa.

Département of Agriculture extension, Isingiro district local government, Isingiro district, Western Uganda.  
Département of Agriculture, Agribusiness and Environmental Sciences Bishop Stuart University Mbarara Uganda.  
Corresponding author nabasatomson@gmail.com

## Abstract

*Agro-tourism has increasingly been recognized as an innovative strategy for promoting rural development and enhancing agribusiness performance through farm diversification, value addition and market expansion. However, empirical evidence on its contribution to agribusiness development in Uganda remains limited, particularly at the district level. This study evaluated the contributions of agro-tourism to agribusiness in Bushenyi District, Uganda, with emphasis on income generation, market expansion, employment creation, value addition and enterprise diversification. The study employed a cross-sectional research design using a mixed-methods approach. Quantitative data were collected from 222 farmers using structured questionnaires, while qualitative data were obtained through key informant interviews with 28 purposively selected participants, comprising local leaders, agricultural extension officers and tourism officials. Quantitative data were analyzed using descriptive statistics, Relative Importance Index (RII), Pearson correlation and multiple regression analysis, while qualitative data were analyzed thematically to complement the quantitative findings. The findings revealed that respondents perceived agro-tourism as making a substantial contribution to agribusiness development, with an overall Relative Importance Index (RII) of 0.842. Strengthening market linkages (RII = 0.872), improving household income (RII = 0.862), promoting agribusiness growth (RII = 0.858), expanding markets (RII = 0.854) and enterprise diversification (RII = 0.850) were ranked as the most important contributions. Correlation analysis demonstrated significant positive relationships between agro-tourism dimensions and agribusiness development ( $p < 0.01$ ). Multiple regression analysis showed that income generation, value addition, market expansion, enterprise diversification and employment creation significantly predicted agribusiness development, collectively explaining 70.9% of the variation in agribusiness performance (Adjusted  $R^2 = 0.702$ ,  $p < 0.001$ ). Income generation emerged as the strongest predictor of agribusiness development. The study concludes that agro-tourism is a significant driver of agribusiness development in Bushenyi District through its positive effects on household income, value addition, market access, employment creation and enterprise diversification. Strengthening agro-tourism initiatives can enhance agricultural commercialization and contribute to sustainable rural economic development. The study recommends that government agencies, local governments and development partners invest in agro-tourism infrastructure, strengthen extension and entrepreneurial training, improve access to finance, promote value addition and develop integrated marketing strategies linking agriculture with tourism. Such interventions would enhance the competitiveness and sustainability of agro-tourism enterprises while improving rural livelihoods in Uganda.*

**Keywords:** Agro-tourism, agribusiness development, rural development, value addition, market expansion, enterprise diversification, Bushenyi District, Uganda.

## **1.0 Introduction**

Agriculture remains the backbone of many rural economies across the world, contributing significantly to employment, food security, poverty reduction and rural livelihoods. In developing countries, however, dependence on conventional agricultural production alone has become increasingly insufficient to sustain household incomes because of declining farm productivity, climate variability, fluctuating commodity prices and shrinking land holdings (Giller et al., 2021). Consequently, there has been growing recognition of the need to diversify agricultural enterprises through complementary income-generating activities that enhance farm resilience while promoting sustainable rural development. One of the most promising diversification strategies is agro-tourism, which integrates agricultural production with tourism-related activities to create additional economic, social and environmental benefits for farming communities (Nguyen et al., 2023). Agro-tourism enables farmers to transform agricultural resources, landscapes, cultural heritage and indigenous knowledge into tourism products, thereby creating multiple revenue streams beyond traditional agricultural production (Meghana et al., 2026).

Globally, agro-tourism has evolved into an important component of rural development strategies. Countries in Europe, North America and parts of Asia have successfully integrated agriculture and tourism to promote farm diversification, increase farmers' incomes and preserve rural landscapes (Zvavahera & Chigora, 2023). Visitors are increasingly attracted to authentic farm experiences, including fruit harvesting, livestock management, coffee tours, farm stays, organic food production, wine tourism and cultural festivals. These activities not only improve farm profitability but also stimulate local employment, strengthen value chains and encourage the conservation of natural and cultural resources (Yu, 2025). Pradnyawati et al. (2024) recognize agro-tourism as an innovative pathway for achieving Sustainable Development Goals related to poverty reduction, decent work, responsible consumption and production, and sustainable rural communities.

In Africa, the integration of agriculture and tourism has gained increasing attention as governments seek strategies to diversify rural economies and enhance agricultural commercialization (Wu et al., 2024). Countries such as South Africa, Kenya, Tanzania and Rwanda have increasingly promoted farm tourism through coffee estates, tea plantations, wildlife conservancies, cultural villages and horticultural enterprises (Bannor et al., 2022). Agro-tourism has been associated with increased farm income, expanded employment opportunities, improved market access for agricultural products and strengthened local entrepreneurship. Moreover, agro-tourism provides opportunities for preserving indigenous agricultural practices and promoting cultural heritage while attracting domestic and international visitors (Chikuta et al., 2023). Nevertheless, the adoption and commercialization of agro-tourism across much of Sub-Saharan Africa remain constrained by inadequate infrastructure, limited investment, weak policy support, poor marketing systems and insufficient entrepreneurial capacity among farmers (John Nyamamu et al., 2025).

Uganda possesses enormous potential for agro-tourism because agriculture employs approximately two-thirds of the labour force and contributes substantially to national economic development (Kalogeropoulou & Tsopanoglou, 2021). The country's diverse agro-ecological zones, favourable climate, fertile soils and rich cultural heritage provide attractive opportunities for integrating farming with tourism. Coffee farms, tea plantations, banana plantations, dairy farms, apiaries, fish farms and traditional livestock production systems

offer unique tourism experiences that can complement existing wildlife and nature-based tourism attractions. The Government of Uganda has increasingly recognized tourism and agriculture as strategic sectors capable of driving inclusive economic growth through the National Development Plan IV, Vision 2040 and the National Tourism Development Programme, which encourage value addition, enterprise diversification and rural employment (Virgin et al., 2022).

Bushenyi District is particularly well positioned to benefit from agro-tourism because of its rich agricultural base and strategic location within Uganda's tourism circuit. The district is renowned for tea plantations, dairy farming, banana cultivation, coffee production and horticultural enterprises, all of which present opportunities for farm-based tourism experiences. In addition, Bushenyi is located near major tourism destinations such as Queen Elizabeth National Park, Kitagata Hot Springs and the Ankole cultural heritage sites, providing opportunities for integrating agricultural experiences into broader tourism packages. Agro-tourism enterprises within the district include farm visits, educational tours, dairy demonstrations, coffee processing experiences, cultural exhibitions and farm-based accommodation. These initiatives have the potential to stimulate local agribusiness development by increasing demand for agricultural products, promoting value addition, creating employment and expanding market opportunities for smallholder farmers.

Agribusiness development encompasses the entire agricultural value chain, including production, processing, marketing, transportation, value addition and service delivery. Sustainable agribusiness growth depends not only on increasing agricultural productivity but also on expanding market opportunities, strengthening rural enterprises and improving farmers' access to diversified sources of income (Truelove et al., 2023). Agro-tourism contributes to agribusiness development by creating direct markets for farm products, encouraging on-farm processing, promoting branding of local products and increasing consumer awareness of agricultural production systems. It also stimulates investments in infrastructure, hospitality services, handicrafts, transportation and rural entrepreneurship, thereby generating multiplier effects throughout local economies (De Brauw & Bulte, 2021). Consequently, agro-tourism has increasingly been viewed as an important strategy for transforming subsistence agriculture into commercially oriented agribusiness systems.

The contribution of agro-tourism to agribusiness may be understood through several interconnected dimensions. Economically, agro-tourism provides farmers with supplementary income, reduces dependence on seasonal crop production and enhances household resilience against market fluctuations (Susila et al., 2024). Socially, it creates employment opportunities for youth and women, strengthens community participation and preserves indigenous knowledge and cultural traditions (Ciani & Vörös, 2020). Environmentally, agro-tourism encourages sustainable land management, biodiversity conservation and environmentally friendly farming practices because the quality of the tourism experience depends on maintaining attractive landscapes and healthy ecosystems (Ammirato et al., 2020). Institutionally, agro-tourism strengthens partnerships among farmers, tourism operators, government agencies and private investors, facilitating innovation, knowledge transfer and rural enterprise development (Karampela et al., 2021).

Despite the growing recognition of agro-tourism as a catalyst for rural transformation, empirical evidence regarding its contribution to agribusiness development in Uganda remains limited. Most existing studies have concentrated on wildlife tourism, ecotourism, hospitality management or agricultural commercialization

independently, with relatively little attention given to the intersection between agriculture and tourism (Muheebwa et al., 2026). Furthermore, available studies often focus on national policy perspectives or established tourism destinations, providing limited understanding of how agro-tourism influences agribusiness development at the district level (Litheko, 2022). Consequently, there remains insufficient evidence regarding the extent to which agro-tourism contributes to income diversification, value addition, employment creation, market expansion and enterprise development among farming households in districts such as Bushenyi.

Although a study conducted by Cavalleri (2021) demonstrates that agro-tourism contributes to rural development through farm diversification, increased household incomes and enhanced value chains, the findings are largely derived from developed economies with mature tourism industries and well-established rural infrastructure. African studies have primarily focused on the potential of agro-tourism rather than measuring its actual contribution to agribusiness performance, while Ugandan research has largely emphasized wildlife tourism and community-based tourism, leaving agro-tourism relatively underexplored (Kesande, 2023). Existing studies seldom examine the multidimensional contributions of agro-tourism to agribusiness in terms of income generation, employment creation, value addition, market access and enterprise diversification within local farming communities. Moreover, few studies integrate perspectives from farmers, agricultural extension personnel, tourism officials and local leaders, resulting in limited contextual understanding of how agro-tourism supports agribusiness development at the district level. This study addresses these gaps by evaluating the contributions of agro-tourism to agribusiness in Bushenyi District using a mixed-methods approach.

## **2.1 Theoretical Perspective of Agrotourism**

This study is anchored in the Sustainable Livelihoods Framework (SLF) developed by Scoones (1998) and modified by Pholotho, (2024) which explains how rural households utilize available assets to diversify livelihood strategies and improve their well-being. The framework identifies five livelihood assets natural, human, physical, financial and social capital that influence households' capacity to engage in productive activities. In the context of this study, agro-tourism represents a livelihood diversification strategy through which farmers combine agricultural production with tourism services to generate additional income, strengthen resilience and reduce dependence on conventional farming. The framework therefore provides a useful basis for understanding how agro-tourism contributes to agribusiness development in Bushenyi District.

The SLF further posits that effective utilization of livelihood assets leads to improved livelihood outcomes, including increased income, employment, enterprise growth and enhanced food security. Bushenyi District possesses abundant natural resources, productive agricultural enterprises, cultural heritage and tourism attractions that can be integrated to promote agro-tourism. Through farm visits, value addition, educational tours and direct marketing of farm products, farmers can diversify their income sources while strengthening agribusiness performance. The framework also recognizes the importance of institutional support, infrastructure and market access in facilitating successful livelihood diversification.

The study is further informed by Rural Development Theory, which emphasizes economic diversification, community participation and sustainable utilization of local resources as drivers of rural transformation (Nelson et al., 2023). The theory argues that rural development extends beyond increasing agricultural productivity to integrating agriculture with complementary sectors such as tourism, processing and entrepreneurship (del Arco

et al.,2021). Agro-tourism creates opportunities for employment, value addition, market expansion and local enterprise development, thereby generating multiplier effects throughout the rural economy. Consequently, the theory explains how integrating tourism with agriculture can stimulate sustainable agribusiness growth and improve rural livelihoods.

The Sustainable Livelihoods Framework and Rural Development Theory jointly provide a comprehensive foundation for this study. While the SLF explains how individual farming households adopt agro-tourism as a livelihood diversification strategy, Rural Development Theory illustrates how these activities contribute to broader rural economic development and agribusiness transformation. Guided by these theories, the study evaluates the contribution of agro-tourism to agribusiness in terms of income generation, employment creation, value addition, market expansion and enterprise development among farmers in Bushenyi District. These theoretical perspectives therefore provide an appropriate framework for interpreting the study findings.

## **2.2 Sustainable Livelihood framework**

The Sustainable Livelihood Framework shows how agro-tourism can utilize human, social, natural, physical and financial assets to promote sustainable agribusiness growth in Uganda. These assets are influenced by vulnerability factors such as climate change, market fluctuations, land degradation and limited infrastructure, while policies, institutions and community participation shape their utilization. Agro-tourism activities such as farm visits, cultural experiences, accommodation, local food services and farm-product marketing provide opportunities for households to diversify livelihoods.

These activities can increase household incomes, create employment, strengthen agribusinesses, improve food security and promote skills development and innovation. They can also encourage environmental conservation and climate resilience through sustainable use of natural resources. The framework therefore demonstrates that leveraging livelihood assets through agro-tourism can reduce vulnerability, strengthen household resilience and contribute to inclusive, profitable and sustainable agribusiness growth in Uganda.

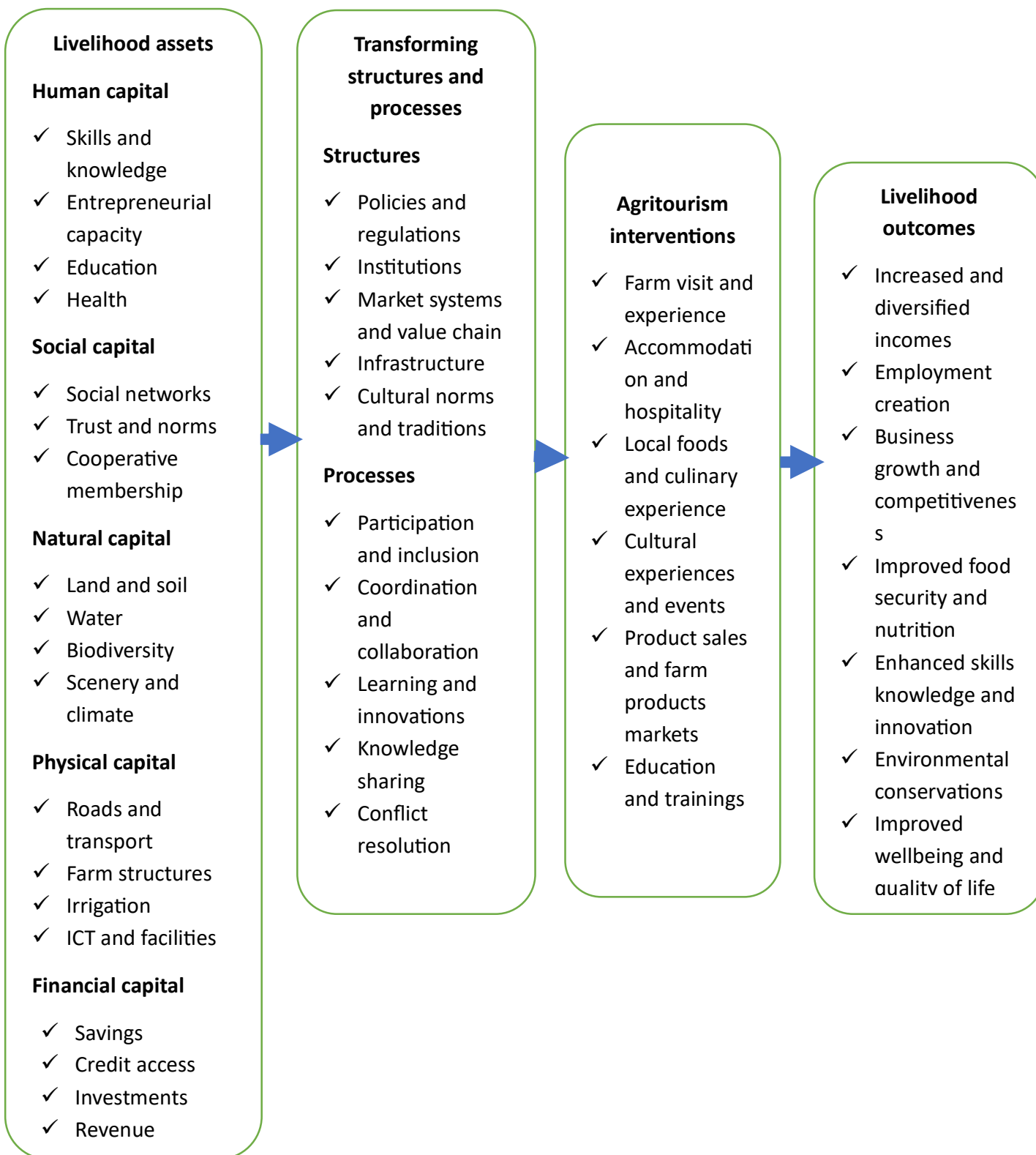


Figure 1: Sustainable Livelihood Framework



### **3.0 Materials and methods**

#### **3.1 Study area**

The study was conducted in Bushenyi District, located in south-western Uganda, a region well known for its favourable climate, fertile soils and strong agricultural base. The district is predominantly rural, with the majority of households depending on agriculture for their livelihoods. Major agricultural enterprises include tea, coffee, bananas, dairy farming, poultry, horticulture and livestock production. Bushenyi is also strategically located near major tourism attractions such as Queen Elizabeth National Park, Kitagata Hot Springs and Igongo Cultural Centre, making it suitable for agro-tourism development. The combination of agricultural resources and tourism potential provides an appropriate setting for evaluating the contribution of agro-tourism to agribusiness development.

Bushenyi District shows significant potential for agro-tourism, featuring tea estates, coffee farms, mixed farming, and other agricultural ventures. Visitors can engage in activities like farm tours, tea and coffee experiences, nature walks, and cultural learning. Key enterprises include Kabeiura Farmers Limited, which integrates various farming practices to attract tourists, and notable tea estates like Igara Growers Tea Factory. Although no specific income figures are available, agro-tourism contributes to the local economy through sales, visitor payments, employment, and increased market access for local products, highlighting the district's reliance on agriculture, trade, and tourism.

#### **3.2 Research design**

The study employed a cross-sectional research design using a mixed-methods research approach, incorporating both quantitative and qualitative approaches to obtain comprehensive data. The quantitative approach enabled the measurement and statistical analysis of farmers' perceptions regarding the contribution of agro-tourism to agribusiness development. The qualitative approach provided in-depth explanations of the experiences, views and perspectives of key stakeholders involved in agriculture and tourism. The integration of the two approaches enhanced the validity and reliability of the findings through triangulation; whereby numerical evidence was complemented by participants' experiences and professional perspectives.

#### **3.3 Data collection**

The target population comprised farming households actively engaged in agricultural production within Bushenyi District. A sample of 222 farmers was selected using appropriate probability sampling techniques to ensure that every eligible farmer had an equal chance of participating in the study. In addition, 28 key informants were

purposely selected because of their knowledge and involvement in agriculture and tourism development. These included local leaders, agricultural extension officers and tourism officials who provided detailed information regarding agro-tourism initiatives, policies and agribusiness development within the district.

Primary data were collected using structured questionnaires administered to the sampled farmers and key informant interviews conducted with selected stakeholders. The questionnaire consisted mainly of closed-ended questions measured on a five-point Likert scale to capture farmers' perceptions of the economic, social and institutional contributions of agro-tourism to agribusiness. Semi-structured interview guides were used during key informant interviews to obtain detailed explanations regarding opportunities, challenges and policy interventions influencing agro-tourism development. Data collection was conducted by trained research assistants under the supervision of the principal researcher.

The research instruments' validity was established using the Content Validity Index (CVI), reviewed by agribusiness and tourism experts for relevance and clarity. A CVI of 0.70 or above was deemed acceptable. A pilot study helped identify ambiguities, enhancing instrument clarity. The reliability of the quantitative questionnaire was confirmed through Cronbach's Alpha, with a minimum acceptable coefficient of 0.70. Ethical approval was secured prior to data collection, participation was voluntary, and informed consent was obtained from all respondents, ensuring their privacy and the secure handling of data for academic use.

### **3.4 Data analysis**

Quantitative data were entered, cleaned and analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarize respondents' characteristics and perceptions regarding agro-tourism. Inferential statistics, including correlation and multiple regression analysis, were employed to determine the contribution of agro-tourism to agribusiness development. Qualitative data obtained from interviews were analyzed thematically by organizing responses into recurring themes and interpreting them alongside quantitative findings to provide comprehensive explanations of the study results.

## **4. Findings and Results**

### **4.1 Demographic Characteristics of Respondent**

Understanding respondents' demographic characteristics is important because personal and socio-economic attributes influence farmers' participation in agro-tourism and agribusiness activities.

Table 1: Demographic Characteristics of Respondents (n = 222)



| Variable        | Category       | Frequency | Percentage (%) |
|-----------------|----------------|-----------|----------------|
| Gender          | Male           | 130       | 58.5           |
|                 | Female         | 92        | 41.5           |
| Age             | Below 25 years | 20        | 9.0            |
|                 | 25–35 years    | 55        | 24.8           |
|                 | 36–45 years    | 62        | 27.9           |
|                 | 46–55 years    | 55        | 24.8           |
|                 | Above 55 years | 30        | 13.5           |
| Marital status  | Single         | 55        | 24.8           |
|                 | Married        | 137       | 61.7           |
|                 | Separated      | 20        | 9.0            |
|                 | Widowed        | 10        | 4.5            |
| Education level | None           | 15        | 6.8            |
|                 | Primary        | 50        | 22.5           |
|                 | Secondary      | 70        | 31.5           |
|                 | Tertiary       | 51        | 23.0           |
|                 | University     | 36        | 16.2           |

Source: Field data 2026

The findings indicate that 58.5% (130) of the respondents were male, while 41.5% (92) were female. The relatively higher proportion of male respondents suggests that men remain the dominant owners or managers of farming enterprises in Bushenyi District. However, the substantial participation of women demonstrates that female farmers also play an important role in agricultural production and agro-tourism activities. This gender distribution provided balanced perspectives regarding the contribution of agro-tourism to agribusiness development.

The majority of respondents (27.9%) were aged 36–45 years, followed by those aged 25–35 years and 46–55 years, each accounting for 24.8%. Respondents above 55 years constituted 13.5%, while those below 25 years represented only 9.0%. These findings suggest that agro-tourism activities are mainly undertaken by economically active adults who possess farming experience, entrepreneurial skills and the capacity to invest in agribusiness enterprises.

Most respondents (61.7%) were married, while 24.8% were single, 9.0% were separated and 4.5% were widowed. The predominance of married respondents implies that household farming remains largely family-based, with spouses contributing jointly to agricultural production and tourism-related enterprises. Family labour and shared decision-making may therefore enhance participation in agro-tourism and agribusiness development.

The results further reveal that 31.5% of respondents had attained secondary education, 23.0% had tertiary education, 22.5% had primary education and 16.2% possessed university education, while only 6.8% had no formal education. The relatively high level of education among respondents suggests that farmers possess the knowledge and skills necessary to adopt innovative agribusiness practices, including agro-tourism. Education is also likely to facilitate access to extension services, market information and entrepreneurial opportunities that enhance agribusiness performance.

#### **4.2 Households Perceptions of the Contributions of Agro-tourism**

Households' perceptions of agro-tourism's contributions to agribusiness are crucial for understanding its economic, social, and environmental benefits in rural communities. Recognized as a means to diversify farm income, generate employment, and enhance market access, these perceptions impact participation in agro-tourism activities and investment in related enterprises. Respondents were asked about the perception on the contributions of agro-tourism to agribusiness development and results from the analysis of their responses were recorded in below.

Table 2 Respondents' Perceptions of the Contributions of Agro-tourism

| Contribution                          | Mean | SD   | RII   | t-value | p-value | Rank |
|---------------------------------------|------|------|-------|---------|---------|------|
| Strengthens market linkages           | 4.36 | 0.69 | 0.872 | 29.41   | <0.001  | 1    |
| Improves household income             | 4.31 | 0.71 | 0.862 | 27.86   | <0.001  | 2    |
| Promotes agribusiness growth          | 4.29 | 0.74 | 0.858 | 26.95   | <0.001  | 3    |
| Expands markets                       | 4.27 | 0.76 | 0.854 | 25.74   | <0.001  | 4    |
| Encourages enterprise diversification | 4.25 | 0.73 | 0.850 | 25.11   | <0.001  | 5    |
| Improves sales of farm products       | 4.22 | 0.74 | 0.844 | 24.62   | <0.001  | 6    |
| Promotes value addition               | 4.18 | 0.82 | 0.836 | 22.46   | <0.001  | 7    |
| Creates employment                    | 4.12 | 0.84 | 0.824 | 21.13   | <0.001  | 8    |
| Improves entrepreneurial skills       | 4.09 | 0.81 | 0.818 | 20.84   | <0.001  | 9    |
| Attracts investment                   | 4.01 | 0.87 | 0.802 | 18.94   | <0.001  | 10   |

Source: Field data 2026

The study findings revealed that strengthening market linkages was the most important contribution of agri-tourism to agribusiness development, as reflected by its first ranking (Mean = 4.36, SD = 0.69, RII = 0.872). The high mean score indicates that respondents generally agreed that agri-tourism enhances market linkages by creating stronger connections between farmers, consumers, traders, and tourism operators, thereby improving market access for agricultural products. The relatively low standard deviation (SD = 0.69) further suggests a high level of consistency in respondents' views. Moreover, the result was statistically significant ( $t = 29.41$ ,  $p < 0.001$ ), implying that the observed positive perception of agri-tourism's role in strengthening market linkages was unlikely to have occurred by chance.

The study findings revealed that improving household income was the second most important contribution of agri-tourism to agribusiness development (Mean = 4.31, SD = 0.71, RII = 0.862, Rank = 2). The high mean score indicates that respondents generally agreed that agri-tourism enhances household income through the sale of agricultural products, provision of tourism-related services, accommodation, and other farm-based enterprises. The relatively high Relative Importance Index (RII = 0.862) further demonstrates that respondents considered income improvement to be one of the major benefits of agri-tourism. The low standard deviation (SD = 0.71) suggests a high degree of agreement among respondents, while the statistically significant result ( $t = 27.86$ ,  $p < 0.001$ ) indicates that this positive perception was unlikely to have occurred by chance.

The study findings revealed that promoting agribusiness growth was ranked as the third most important contribution of agri-tourism to agribusiness development (Mean = 4.29, SD = 0.74, RII = 0.858, Rank = 3). The high mean score indicates that respondents strongly agreed that agri-tourism promotes the growth of agribusinesses by increasing demand for agricultural products, creating new business opportunities, and encouraging investment in farming enterprises. The high Relative Importance Index (RII = 0.858) further demonstrates the significance attached to this contribution by respondents. The relatively low standard deviation (SD = 0.74) reflects consistency in respondents' opinions, while the statistically significant result ( $t = 26.95$ ,  $p < 0.001$ ) confirms that the observed perception of agri-tourism as a driver of agribusiness expansion was statistically reliable and unlikely to have occurred by chance.

The study findings revealed that expanding markets was ranked as the fourth most important contribution of agri-tourism to agribusiness development (Mean = 4.27, SD = 0.76, RII = 0.854, Rank = 4). The high mean score indicates that respondents agreed that agri-tourism expands market opportunities by attracting tourists who purchase agricultural products directly from farms, thereby enabling farmers to access new customer segments

beyond traditional markets. This reduces reliance on conventional marketing channels and enhances the commercialization of agricultural products. The high Relative Importance Index ( $RII = 0.854$ ) demonstrates the strong significance attached to market expansion as a benefit of agri-tourism. The relatively low standard deviation ( $SD = 0.76$ ) indicates consistency in respondents' perceptions, while the statistically significant result ( $t = 25.74, p < 0.001$ ) confirms that the observed agreement among respondents was statistically reliable and unlikely to have occurred by chance.

The study findings revealed that encouraging enterprise diversification was ranked as the fifth most important contribution of agri-tourism to agribusiness development (Mean = 4.25,  $SD = 0.73$ ,  $RII = 0.850$ , Rank = 5). The high mean score indicates that respondents strongly agreed that agri-tourism promotes diversification of household income-generating activities through the establishment of tourism-related enterprises such as guided farm tours, recreational services, food processing, handicrafts, and accommodation facilities. The high Relative Importance Index ( $RII = 0.850$ ) further demonstrates that enterprise diversification was considered a significant benefit of agri-tourism among respondents. The relatively low standard deviation ( $SD = 0.73$ ) suggests consistency in respondents' opinions, while the statistically significant result ( $t = 25.11, p < 0.001$ ) confirms that the perceived contribution of agri-tourism in promoting enterprise diversification was statistically reliable and not due to chance.

The study findings revealed that improving sales of farm products was ranked as the sixth most important contribution of agri-tourism to agribusiness development (Mean = 4.22,  $SD = 0.74$ ,  $RII = 0.844$ , Rank = 6). The high mean score indicates that respondents agreed that agri-tourism enhances the sale of agricultural products by providing farmers with opportunities to directly market their produce to visitors and tourists. This direct marketing approach reduces dependence on intermediaries, lowers transaction costs, and enables farmers to obtain better prices for fresh agricultural products and value-added commodities. The high Relative Importance Index ( $RII = 0.844$ ) demonstrates the significant contribution of agri-tourism in improving farm product sales. The relatively low standard deviation ( $SD = 0.74$ ) indicates consistency in respondents' perceptions, while the statistically significant result ( $t = 24.62, p < 0.001$ ) confirms that the observed contribution was statistically reliable and unlikely to have occurred by chance.

The study findings revealed that promoting value addition was ranked as the seventh most important contribution of agri-tourism to agribusiness development (Mean = 4.18,  $SD = 0.82$ ,  $RII = 0.836$ , Rank = 7). The mean score indicates that respondents generally agreed that agri-tourism encourages farmers to process, package, and brand agricultural products in order to enhance their quality, increase their market value, and improve their

attractiveness to tourists. The Relative Importance Index ( $RII = 0.836$ ) further demonstrates that value addition was considered an important benefit of agri-tourism, although it ranked lower compared to other contributions. The relatively higher standard deviation ( $SD = 0.82$ ) suggests some variation in respondents' perceptions, possibly due to differences in access to processing facilities and value addition skills. However, the statistically significant result ( $t = 22.46$ ,  $p < 0.001$ ) confirms that respondents' perception of agri-tourism's role in promoting value addition was statistically significant and not due to chance.

The study findings revealed that creating employment opportunities was ranked as the eighth most important contribution of agri-tourism to agribusiness development (Mean = 4.12,  $SD = 0.84$ ,  $RII = 0.824$ , Rank = 8). The high mean score indicates that respondents agreed that agri-tourism contributes to employment creation among household members and the wider community through activities such as farm operations, hospitality services, tour guiding, transportation, food preparation, and marketing of agricultural products. Although this contribution ranked eighth, the high Relative Importance Index ( $RII = 0.824$ ) demonstrates that employment generation remains a significant benefit associated with agri-tourism development. The relatively higher standard deviation ( $SD = 0.84$ ) suggests some variation in respondents' views, which may be attributed to differences in the extent to which households engage in agri-tourism activities. Nevertheless, the statistically significant result ( $t = 21.13$ ,  $p < 0.001$ ) confirms that the perceived role of agri-tourism in creating employment opportunities was statistically reliable and unlikely to have occurred by chance.

The study findings revealed that improving entrepreneurial skills was ranked as the ninth most important contribution of agri-tourism to agribusiness development (Mean = 4.09,  $SD = 0.81$ ,  $RII = 0.818$ , Rank = 9). The mean score above 4.0 indicates that respondents generally agreed that participation in agri-tourism enhances farmers' entrepreneurial capacities by exposing them to business management practices, customer service, financial planning, marketing strategies, and innovation. The Relative Importance Index ( $RII = 0.818$ ) further shows that entrepreneurial skills development was considered a meaningful contribution of agri-tourism, despite ranking lower than other benefits. The relatively low standard deviation ( $SD = 0.81$ ) suggests a reasonable level of consistency in respondents' opinions. Furthermore, the statistically significant result ( $t = 20.84$ ,  $p < 0.001$ ) confirms that the observed perception regarding the contribution of agri-tourism in improving entrepreneurial skills was statistically significant and not due to chance.

The study findings revealed that attracting investment was ranked as the tenth and least important contribution of agri-tourism to agribusiness development (Mean = 4.01,  $SD = 0.87$ ,  $RII = 0.802$ , Rank = 10). Despite receiving the lowest ranking, the mean score above 4.0 indicates that respondents generally agreed that agri-tourism has

the potential to attract investment into agribusiness activities. Respondents perceived that successful agri-tourism enterprises can stimulate investment in areas such as farm infrastructure development, agricultural processing facilities, accommodation services, and other supporting businesses. The Relative Importance Index (RII = 0.802) demonstrates that investment attraction remains a relevant contribution of agri-tourism, although it was considered less influential compared to other benefits. The relatively higher standard deviation (SD = 0.87) suggests greater variation in respondents' perceptions, which may be attributed to differences in access to investment opportunities among households. However, the statistically significant result ( $t = 18.94$ ,  $p < 0.001$ ) confirms that the observed perception of agri-tourism's role in attracting investment was statistically significant and unlikely to have occurred by chance.

#### 4.2.2 Correlation Matrix on the contributions of Agro-tourism to agribusiness development

The study further utilized correlation analysis to explore the contributions of agri-tourism to agribusiness development, focusing on various key variables such as income generation, market expansion, employment creation, value addition, and enterprise diversification. Pearson correlation coefficients were employed to assess the significance of relationships between agri-tourism activities and agribusiness outcomes, revealing insights into the interactions that enhance agribusiness performance

Table 3: Correlation Matrix on the contributions of Agro-tourism to agribusiness development

| Variable                   | 1       | 2       | 3       | 4       | 5       | 6 |
|----------------------------|---------|---------|---------|---------|---------|---|
| Income generation          | 1       |         |         |         |         |   |
| Market expansion           | 0.642** | 1       |         |         |         |   |
| Employment creation        | 0.585** | 0.611** | 1       |         |         |   |
| Value addition             | 0.671** | 0.698** | 0.596** | 1       |         |   |
| Enterprise diversification | 0.623** | 0.659** | 0.542** | 0.615** | 1       |   |
| Agribusiness development   | 0.724** | 0.681** | 0.597** | 0.709** | 0.693** | 1 |

Source: Field data 2026

The study findings revealed that there were positive and statistically significant relationships between agri-tourism-related factors and agribusiness development. Agribusiness development showed a strong positive correlation with income generation ( $r = 0.724$ ,  $p < 0.01$ ), value addition ( $r = 0.709$ ,  $p < 0.01$ ), enterprise diversification ( $r = 0.693$ ,  $p < 0.01$ ), market expansion ( $r = 0.681$ ,  $p < 0.01$ ), and employment creation ( $r = 0.597$ ,  $p < 0.01$ ). This indicates that improvements in income generation, market access, value addition, enterprise



diversification, and employment opportunities associated with agri-tourism are significantly linked to enhanced agribusiness development. Among the independent variables, value addition had the strongest relationship with market expansion ( $r = 0.698$ ,  $p < 0.01$ ), while income generation also demonstrated strong associations with value addition ( $r = 0.671$ ,  $p < 0.01$ ) and enterprise diversification ( $r = 0.623$ ,  $p < 0.01$ ). The positive correlations among all variables suggest that agri-tourism activities complement each other, where increased market opportunities, improved processing and packaging, diversified enterprises, and employment creation collectively contribute to strengthening agribusiness development. The results further imply that promoting agri-tourism interventions that enhance these components can play a significant role in improving the performance and sustainability of agribusiness enterprises.

#### 4.2.3 Multiple Regression Analysis of the contributions of Agri-tourism to agribusiness development

The study utilized multiple regression analysis to assess how various agri-tourism components such as income generation, market expansion, employment creation, value addition, and enterprise diversification contribute to agribusiness development. It identified each factor's relative contribution while accounting for other variables, yielding insights on effective agri-tourism interventions that boost agribusiness growth and sustainability.

Table 4: Multiple Regression Analysis of the contributions of Agri-tourism to agribusiness development

| Predictor                  | $\beta$ | Std. Error | Standardized $\beta$ | t    | p-value | VIF  |
|----------------------------|---------|------------|----------------------|------|---------|------|
| Constant                   | 0.942   | 0.214      | —                    | 4.40 | <0.001  | —    |
| Income generation          | 0.281   | 0.052      | 0.294                | 5.42 | <0.001  | 1.84 |
| Market expansion           | 0.213   | 0.047      | 0.226                | 4.53 | <0.001  | 2.11 |
| Employment creation        | 0.119   | 0.045      | 0.123                | 2.64 | 0.009   | 1.76 |
| Value addition             | 0.248   | 0.049      | 0.259                | 5.07 | <0.001  | 2.04 |
| Enterprise diversification | 0.182   | 0.051      | 0.191                | 3.57 | <0.001  | 1.91 |

Source: Field data 2026

The study findings revealed that income generation, market expansion, employment creation, value addition, and enterprise diversification were significant predictors of agribusiness development. Income generation had the strongest positive influence on agribusiness development ( $\beta = 0.281$ , Standardized  $\beta = 0.294$ ,  $t = 5.42$ ,  $p < 0.001$ ), indicating that improvements in household income through agri-tourism activities significantly contribute to enhanced agribusiness performance. Value addition was the second strongest predictor ( $\beta = 0.248$ , Standardized  $\beta = 0.259$ ,  $t = 5.07$ ,  $p < 0.001$ ), suggesting that processing, packaging, and branding of agricultural products play a significant role in strengthening agribusiness development. Market expansion also had a significant positive effect ( $\beta = 0.213$ , Standardized  $\beta = 0.226$ ,  $t = 4.53$ ,  $p < 0.001$ ), implying that improved access to markets through agri-tourism enhances business growth. Enterprise diversification significantly influenced agribusiness development ( $\beta = 0.182$ , Standardized  $\beta = 0.191$ ,  $t = 3.57$ ,  $p < 0.001$ ), demonstrating that engaging in diverse agri-tourism-related enterprises contributes to improved agribusiness outcomes. Similarly, employment creation had a positive and statistically significant effect ( $\beta = 0.119$ , Standardized  $\beta = 0.123$ ,  $t = 2.64$ ,  $p = 0.009$ ), indicating that job opportunities generated through agri-tourism activities contribute to agribusiness development. The

Variance Inflation Factor (VIF) values ranged from 1.76 to 2.11, which are below the commonly accepted threshold of 5, indicating that multicollinearity among the predictor variables was not a concern.

## 5 Discussion

The study assessed households' perceptions regarding the contributions of agro-tourism to agribusiness development in Bushenyi District. The findings revealed that respondents strongly perceived agro-tourism as an important pathway for enhancing agribusiness development, as demonstrated by the high overall Relative Importance Index (RII) of 0.842. All assessed contribution indicators recorded mean scores above the neutral midpoint and were statistically significant ( $p < 0.001$ ), indicating a strong level of agreement among respondents. These findings imply that agro-tourism contributes to rural enterprise development through improved market access, increased household income, enterprise diversification, value addition, employment creation and enhancement of entrepreneurial capacities. During an interview; A farmer explained;

*“Before agro-tourism, we mainly depended on selling crops after harvest, but now visitors come to see our farms, buy our products and pay for experiences. This has helped us to earn money from different activities throughout the year.”*

Another respondent added;

*“Agro-tourism has changed the way we think about farming because the farm itself has become a source of income beyond crop production. We now consider farming as a business that can attract customers.”*

The results support Bannor et al. (2022), who observed that diversification into agro-tourism among cocoa farmers in Ghana provided alternative income sources and strengthened farmers' economic resilience. Also, Ammirato et al. (2020) noted that agro-tourism integrates agricultural production with tourism experiences, creating multiple livelihood opportunities while promoting sustainable rural development. In Bushenyi District, the findings suggest that farmers increasingly view agriculture not only as a production activity but also as a tourism-based business opportunity capable of generating additional economic benefits.

Results established that strengthening market linkages emerged as the leading contribution of agro-tourism to agribusiness development, with the highest RII value of 0.872. This finding indicates that households strongly perceived agro-tourism as an effective mechanism for connecting farmers directly with consumers, tourists, hotels, restaurants, educational institutions and other market actors. Through farm visits, product exhibitions, farm-gate sales, tasting events and cultural experiences, agro-tourism reduces farmers' dependence on traditional marketing intermediaries and creates opportunities for direct exchange between producers and consumers. Direct market interaction also enables farmers to understand consumer preferences, improve product quality and develop products that respond to changing market demands. During an interview one of the agriculture extension officers had this to say;

*“Agro-tourism has helped farmers to meet buyers directly. Visitors who come to farms often purchase fresh products, processed foods and local products, which reduces dependence on middlemen.”*

A farmer also noted;

*“When tourists visit our farms, they do not only come to see crops; they buy coffee, fruits and other products. This has created a ready market for what we produce.”*

The finding agrees with Truelove et al. (2023), who emphasized that strong agricultural value chain linkages enhance farmers' participation in profitable markets by improving connections between production, processing and consumption. Similarly, De Brauw and Bulte (2021) noted that effective integration of farmers into value chains is critical for increasing agricultural competitiveness and improving rural incomes. In addition, Susila et al. (2024) reported that interconnectivity among farmers, consumers and tourism stakeholders is essential for successful agro-tourism development. Therefore, the high ranking of market linkages in Bushenyi District demonstrates that agro-tourism provides a platform through which farmers can overcome market constraints and establish more reliable outlets for agricultural products.

The study findings indicate that improvement of household income was ranked second among the contributions of agro-tourism, with an RII of 0.862. The finding demonstrates that households considered agro-tourism an important strategy for increasing financial returns from agricultural activities. Agro-tourism provides additional income streams through farm entrance fees, guided tours, accommodation services, food preparation, cultural performances, recreational activities and direct sales of farm products. Unlike conventional farming, where income is often realized only after harvest seasons, agro-tourism enables farmers to generate continuous earnings from multiple activities throughout the year. During an interview; A farmer explained;

*“Agro-tourism has increased our household income because visitors pay for farm experiences and also buy our agricultural products. This money helps us support education, health and other household needs.”*

Another farmer reported;

*“In the past, we waited for harvest time to get income, but now we can earn money when tourists visit the farm and purchase our products.”*

The findings are consistent with Bannor et al. (2022), who found that cocoa farmers in Ghana adopted agro-tourism as an alternative livelihood strategy to supplement agricultural income and reduce vulnerability to market fluctuations. Similarly, Meghana et al. (2026) reported that agro-tourism supports sustainable livelihoods by linking income generation with environmental conservation and cultural experiences. Furthermore, Zvavahera and Chigora (2023) highlighted agro-tourism as a driver of socio-economic transformation in developing economies because it creates additional revenue opportunities for rural households. Therefore, the positive perception of income improvement in Bushenyi District reflects the ability of agro-tourism to enhance household financial security and reduce dependence on traditional agricultural income sources.

Results established that value addition was another highly rated contribution of agro-tourism, with an RII of 0.836. The findings indicate that agro-tourism encourages farmers to process, package, brand and improve the presentation of agricultural products in order to attract visitors and obtain better prices. Tourism consumers often seek unique, high-quality and locally produced products, motivating farmers to move beyond selling raw commodities towards processed products such as roasted coffee, dairy products, honey, fruit juices, handicrafts and traditional foods. This transition increases the economic value of agricultural outputs and enables farmers to

capture greater benefits along the value chain. During an interview the district agriculture officer had this to confirm;

*“Agro-tourism promotes value addition because farmers realize that processed products attract higher prices and create better experiences for tourists.”*

A farmer explained;

*“Visitors do not want only raw products; they want something prepared, packaged and connected to our local culture. This has encouraged us to add value to our coffee, milk and fruits.”*

The finding is supported by De Brauw and Bulte (2021), who emphasized that value addition enhances farmers' competitiveness by improving product quality, marketability and profitability. Similarly, Truelove et al. (2023) argued that agricultural value chains become more beneficial to producers when farmers participate in processing and marketing activities rather than only supplying raw materials. Wu et al. (2024) further observed that farm diversification through agro-tourism stimulates innovation by encouraging farmers to develop new products and services that meet consumer expectations. Therefore, agro-tourism in Bushenyi District appears to encourage farmers to transform agricultural products into attractive market-oriented commodities.

The study findings indicate that market expansion was identified as one of the important contributions of agro-tourism to agribusiness development, recording an RII of 0.854 and ranking fourth among the assessed indicators. The finding indicates that households perceived agro-tourism as a mechanism for widening the customer base for agricultural products beyond traditional local markets. Through agro-tourism activities, farmers interact with domestic tourists, international visitors, schools, hotels, restaurants, tour operators and other institutional buyers who provide alternative markets for agricultural commodities. Such expanded market opportunities enable farmers to improve product visibility, increase sales volumes and reduce the risks associated with dependence on limited buyers. During an interview; A farmer explained;

*“Through visitors who come to our farms, we have found new customers who buy our products. Some visitors even return or recommend our products to other people.”*

Another respondent stated:

*“Agro-tourism has helped our agricultural products to become known by people who would not have reached our farms through ordinary markets.”*

The finding is consistent with Karampela et al. (2021), who noted that agro-tourism creates stronger connections between rural production systems and tourism markets, allowing agricultural communities to benefit from new consumption patterns. Similarly, Ciani and Vörös (2020) emphasized that rural and agro-tourism contribute to sustainable rural development by integrating local products into wider economic networks. In addition, Susila et al. (2024) highlighted that successful agro-tourism depends on effective interconnectivity among farmers, consumers and tourism stakeholders, which facilitates market access and business growth. Therefore, the positive perception among households in Bushenyi District suggests that agro-tourism enhances the commercial potential of agricultural enterprises by creating diversified and more reliable market channels.

The study findings established that enterprise diversification was ranked fifth among the contributions of agro-tourism, with an RII of 0.850. This finding demonstrates that households recognized agro-tourism as an approach that encourages farmers to combine agricultural production with additional income-generating enterprises. Farmers participating in agro-tourism activities may integrate crop production, livestock keeping, farm tours, accommodation services, catering, cultural performances, recreational activities and sale of processed products. Such diversification reduces overdependence on single agricultural enterprises and improves household resilience against production risks, market fluctuations and climate-related challenges. During an interview one of the agriculture extension workers revealed that;

*“Farmers involved in agro-tourism no longer depend on one activity. They combine farming with hospitality, food preparation, demonstrations and selling products to visitors.”*

A farmer explained:

*“We have diversified our farm because visitors need different experiences. Apart from crops, we now provide food, farm tours and local products.”*

The finding agrees with the Sustainable Livelihoods Framework, which emphasizes that rural households improve their livelihood security by combining different assets and engaging in diversified economic activities (Pholotho, 2024). Similarly, Bannor et al. (2022) found that agro-tourism provides alternative livelihood opportunities for farmers by enabling them to diversify income sources beyond conventional agricultural production. Wu et al. (2024) further demonstrated that farm diversification through agro-tourism promotes innovation because farmers develop new products, services and experiences to meet visitor expectations. These findings indicate that agro-tourism in Bushenyi District contributes to transforming farms from production-oriented units into diversified agribusiness enterprises.

The study findings established that improvement of sales of farm products was ranked sixth, with an RII of 0.844. The results indicate that households perceived agro-tourism as contributing to increased sales of agricultural commodities through direct marketing approaches. Unlike conventional markets where farmers often sell through intermediaries, agro-tourism allows producers to sell directly to visitors at the farm level. This reduces marketing costs, increases farmers' bargaining power and enables them to receive better returns from their products. During an interview A farmer stated;

*“When tourists visit, they buy our products directly from the farm. This has increased our sales compared to when we only depended on local traders.”*

Another respondent noted:

*“Visitors appreciate products produced from the farms they have visited, so they are willing to buy and pay better prices.”*

The findings correspond with the arguments of Truelove et al. (2023), who emphasized that effective value chain participation improves farmers' ability to access profitable markets and increase returns from agricultural activities. De Brauw and Bulte (2021) similarly noted that farmers gain greater economic benefits when they participate in downstream activities such as processing, branding and direct marketing. Furthermore,

Kalogeropoulou and Tsopanoglou (2021) reported that digital and promotional approaches associated with tourism can strengthen product visibility and improve market opportunities for rural enterprises. Thus, agro-tourism provides farmers with opportunities to increase product turnover while strengthening relationships with consumers.

The study findings established that employment creation was ranked eighth, with an RII of 0.824. Although it received a relatively lower ranking compared with income generation and market linkages, respondents still strongly agreed that agro-tourism contributes to job creation. Agro-tourism enterprises generate employment opportunities in farm management, tour guiding, food preparation, accommodation services, transportation, product processing, marketing and cultural activities. These opportunities are particularly important for rural youth and women who may have limited access to formal employment opportunities. During an interview one of the District Tourism Officer had this to reveal;

*“Most agro-tourism activities currently depend on family labour, but as farms expand, they create opportunities for guides, workers and service providers.”*

A farmer added:

*“Young people can get work through agro-tourism by guiding visitors, preparing food and helping with farm activities.”*

The finding supports Nelson et al. (2023), who highlighted that sustainable rural development strategies should promote local employment opportunities through utilization of available resources. Similarly, Zvavahera and Chigora (2023) identified agro-tourism as an important pathway for socio-economic transformation because it stimulates employment and supports community-based enterprises. However, the relatively lower ranking may be explained by the fact that many agro-tourism activities in Bushenyi are still small-scale and family-operated, limiting the number of permanent employment opportunities created.

The study findings indicate that improvement of entrepreneurial skills recorded an RII of 0.818 and ranked ninth among the assessed contributions. The findings suggest that households perceived agro-tourism as contributing to the development of business-related skills, including customer care, marketing, financial management, innovation and enterprise planning. Participation in agro-tourism requires farmers to understand consumer preferences, manage visitors, promote products and improve service delivery, thereby strengthening their entrepreneurial capacity. During an interview A farmer explained:

*“Through agro-tourism, we have learned how to welcome customers, package products and manage our businesses better than before.”*

Another respondent stated:

*“Farmers are gaining business knowledge because visitors expect good services, quality products and proper organization.”*



The finding is supported by Litheko (2022), who emphasized that the development of small agro-tourism enterprises requires improved managerial skills, innovation and entrepreneurial capabilities among rural households. Similarly, del Arco et al. (2021) noted that community empowerment, innovation and knowledge development are critical components of sustainable rural transformation. Agro-tourism therefore provides practical learning opportunities that enable farmers to shift from subsistence production towards market-oriented agribusiness management.

Results established that attraction of investment ranked tenth, although it remained statistically significant, with an RII of 0.802. The findings indicate that households recognized the potential of agro-tourism to attract investments into agricultural infrastructure, processing facilities, accommodation services and tourism-related enterprises. Investment generated through agro-tourism can improve farm facilities, enhance production capacity and create stronger linkages between agriculture and other rural economic sectors. During an interview one of the District Commercial Officer had this to say:

*“Agro-tourism has potential to attract investors, but farmers need support in infrastructure, marketing and financing to develop bigger enterprises.”*

A farmer noted:

*“If we had more support and investment, our farms could attract more visitors and provide better services.”*

The finding agrees with Ammirato et al. (2020), who reported that agro-tourism can stimulate sustainable investments by increasing the economic value of rural landscapes and agricultural resources. Similarly, Muheebwa et al. (2026) emphasized that sustainable marketing and innovative financing mechanisms are important for expanding agro-tourism enterprises in Western Uganda. However, the lower ranking may indicate that investment opportunities remain limited due to challenges such as inadequate infrastructure, limited financing options, low promotion and insufficient institutional support.

The correlation analysis revealed positive and statistically significant relationships between all agro-tourism contribution dimensions and agribusiness development. The strongest relationships were observed between income generation, market expansion, value addition and enterprise diversification, indicating that these factors play interconnected roles in improving agribusiness performance. The findings suggest that agro-tourism should not be considered only as a tourism activity but as an integrated agribusiness strategy that links production, processing, marketing and consumption. During an interview a farmer summarized;

*“Agro-tourism works as a chain; when visitors come, they buy products, we earn income, improve our farms and create more activities.”*

These findings are consistent with Karampela et al. (2021), who argued that agro-tourism represents an intersection between agriculture, tourism and sustainable development. Similarly, Ammirato et al. (2020) emphasized that agro-tourism creates multifunctional rural systems where agricultural resources generate economic, social and environmental benefits. Therefore, improvements in one contribution area can stimulate

progress in other areas. For example, stronger market linkages increase sales, increased income enables investment in value addition, and diversified enterprises improve household resilience.

The multiple regression model explained 70.9% of the variation in agribusiness development, demonstrating that agro-tourism contributions collectively provide a strong explanation of agribusiness performance among farmers in Bushenyi District. The significant contribution of income generation, market expansion, value addition, employment creation and enterprise diversification indicates that agro-tourism has considerable potential to stimulate rural economic transformation. The findings support the Sustainable Livelihoods Framework, which explains that households improve their wellbeing by effectively utilizing available natural, financial, social and human assets (Pholotho, 2024). Agro-tourism enables farmers to convert land, agricultural products, cultural knowledge and rural landscapes into valuable economic resources. The findings also align with Rural Development Theory, which emphasizes local resource utilization, community participation and diversification as pathways for rural transformation (Nelson et al., 2023). By linking farming with tourism, agro-tourism generates benefits beyond individual households by supporting transport operators, food vendors, artisans, accommodation providers and local markets.

## **6. Conclusion**

The study concludes that agro-tourism makes a positive and statistically significant contribution to agribusiness development in Bushenyi District. Respondents perceived agro-tourism as particularly important in strengthening market linkages, increasing household income, promoting value addition, expanding markets and supporting enterprise diversification. The multiple regression findings showed that the selected agro-tourism dimensions jointly explained a substantial proportion of variation in agribusiness development. Income generation emerged as the strongest predictor, followed by value addition, market expansion, enterprise diversification and employment creation.

Agro-tourism provides farmers with opportunities to transform agricultural resources into diversified products, services and visitor experiences. Through direct marketing, processing, branding, accommodation, educational tours and cultural activities, farmers can generate additional income and improve the commercial performance of their enterprises. Agro-tourism therefore represents more than a supplementary tourism activity; it is a viable rural development strategy capable of linking agricultural production, entrepreneurship, tourism and local economic development.

The study further concludes that the contribution of agro-tourism depends on the availability of infrastructure, financial resources, entrepreneurial capacity, institutional coordination and effective marketing systems. Without adequate support, smallholder farmers may be unable to establish and maintain tourism facilities that meet visitor expectations. Sustainable development of agro-tourism therefore requires collaboration among farmers, local governments, tourism agencies, agricultural extension services, financial institutions and private investors.

## **7. Recommendations**

The Bushenyi District Local Government should develop a district agro-tourism development strategy that identifies suitable farms, agricultural enterprises, tourism routes and investment opportunities. The strategy

should integrate agro-tourism into district agricultural and tourism development plans and establish clear roles for agricultural officers, tourism officials and community leaders.

Agricultural extension officers and tourism agencies should provide farmers with training in hospitality management, customer care, food safety, farm branding, digital marketing, financial management and product development. Such training would enable farmers to transform ordinary agricultural activities into attractive and commercially viable visitor experiences.

Government and financial institutions should establish affordable credit and grant facilities for farmers interested in agro-tourism. Access to finance would enable farmers to improve farm infrastructure, construct visitor facilities, establish sanitary services, purchase processing equipment and develop accommodation and recreational services.

Investment should be made in rural roads, electricity, water supply, internet connectivity, directional signs and communication infrastructure in agro-tourism areas. Improved infrastructure would increase the accessibility and attractiveness of farm-based tourism enterprises and facilitate transportation of agricultural products.

Farmers should be encouraged to establish associations and cooperative networks that promote joint marketing, product standardization, knowledge sharing and collective bargaining. Collaborative agro-tourism routes could combine tea farms, dairy enterprises, coffee farms, banana plantations, cultural sites and food-processing enterprises into integrated visitor packages.

Tour operators, hotels, schools and universities should be encouraged to partner with agro-tourism farms. Such partnerships could promote educational visits, agricultural demonstrations, research tours, local food experiences and cultural activities. These linkages would create reliable visitor flows and expand markets for agricultural products.

Farmers should prioritize value addition through processing, packaging, branding and certification of locally produced agricultural commodities. Products associated with the Bushenyi agro-tourism identity could be marketed to visitors as unique local products, thereby increasing their commercial value and strengthening district-level branding.

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## **Author Contributions**

The authors solely conceptualized and designed the study, conducted the literature review, developed the research methodology, coordinated data collection, performed data analysis and interpretation, drafted and revised the manuscript, and approved the final version for publication. The authors accept full responsibility for the accuracy,

integrity, and originality of the work and confirms that all aspects of the study were undertaken in accordance with accepted academic and ethical standards.

### **Conflict of Interest**

The authors declare that there are no financial, commercial, institutional, professional, or personal relationships that could be construed as a potential conflict of interest in the conduct of this study, the analysis and interpretation of the data, the preparation of the manuscript, or the decision to publish the findings. The research was conducted independently, and the authors confirm that the results presented are original, objective, and free from any undue influence.

### **References**

- Ammirato, S., Felicetti, A. M., Raso, C., Pansera, B. A., & Violi, A. (2020). Agritourism and sustainability: What we can learn from a systematic literature review. *Sustainability*, 12(22), 9575.
- Bannor, R. K., Oppong-Kyeremeh, H., Amfo, B., & Allotey, A. A. (2022). Diversification into agritourism by cocoa farmers in Ghana as an alternative source of income. *Agricultural Finance Review*, 82(5), 960-982.
- Cavalleri, S. A. E. (2021). Developing a system of community-based agritourism for sustainable local food systems: A multi-case study of rural livelihood diversification and sustainable urban consumption in city-regional Bangkok.
- Chikuta, O., Vumbunu, T., & Phuduhudu, T. (2023). Agritourism in Botswana: challenges and prospects.
- Ciani, A., & Vörös, M. L. (2020). Rural tourism and agrotourism as drivers of the sustainable rural development—a proposal for a cross-border cooperation strategy. *Management Tourism Culture*, 87.
- De Brauw, A., & Bulte, E. (2021). *African farmers, value chains and agricultural development*. Cham: Springer International Publishing.
- del Arco, I., Ramos-Pla, A., Zsembinszki, G., de Gracia, A., & Cabeza, L. F. (2021). Implementing sdgs to a sustainable rural village development from community empowerment: Linking energy, education, innovation, and research. *Sustainability*, 13(23), 12946.
- Giller, K. E., Delaune, T., Silva, J. V., Descheemaeker, K., Van De Ven, G., Schut, A. G., ... & van Ittersum, M. K. (2021). The future of farming: Who will produce our food? *Giller KE et al. Food security*, 13(5), 1073-1099.
- John Nyamamu, E., Nchimbi, C. S., Halifan Mteti, S., & Ndimbo, G. K. (2025). Potentials and challenges for rural livelihood diversification and poverty alleviation in Sub-Saharan Africa: A systematic review. *Sage Open*, 15(4), 21582440251379011.
- Kalogeropoulou, C. A., & Tsopanoglou, E. (2021). The policy of agrotourism and the promotion of sustainable development via social media. 7-8October.
- Karampela, S., Andreopoulos, A., & Koutsouris, A. (2021). “Agro”, “Agri”, or “Rural”: The different viewpoints of tourism research combined with sustainability and sustainable development. *Sustainability*, 13(17), 9550.

- Karampela, S., Andreopoulos, A., & Koutsouris, A. (2021). “Agro”, “Agri”, or “Rural”: The different viewpoints of tourism research combined with sustainability and sustainable development. *Sustainability*, 13(17), 9550.
- Kesande, P. (2023). Participation of fragile collectives in community-based tourism development in Uganda.
- Litheko, A. (2022). Development and management of small agro-tourism enterprises: a rural development strategy. *Development*, 11(3), 1053-1069.
- Meghana, N., Singh, R., Barman, B., Quader, S. W., & Praveen, K. V. (2026). Agro-Tourism Supporting Sustainable Livelihoods from Income Generation to Environmental Sustainability. *Cleaner Food Systems*, 100058.
- Muheebwa, F. P., Kwagala, M., & Mugisha, A. F. (2026). Integrating Sustainable Marketing and Innovative Financing to boost Agritourism in Western Uganda. In *Financial Innovation and Sustainable Enterprise in Developing and Emerging Economies: Modern FinTech Solutions to Ensure Inclusivity and Accessibility* (pp. 121-138). Cham: Springer Nature Switzerland.
- Nelson, K. S., Nguyen, T. D., Francois, J. R., & Ojha, S. (2023). Rural sustainability methods, drivers, and outcomes: A systematic review. *Sustainable Development*, 31(3), 1226-1249.
- Nguyen, T. T., Grote, U., Neubacher, F., Do, M. H., & Paudel, G. P. (2023). Security risks from climate change and environmental degradation: implications for sustainable land use transformation in the Global South. *Current Opinion in Environmental Sustainability*, 63, 101322.
- Pholotho, M. H. (2024). Sustainable Livelihoods Approach Practice in South Africa’s Public Sector (Master's thesis, University of South Africa (South Africa)).
- Pradnyawati, I. A. K., Anom, I. P., & Sendra, I. M. (2024). Integrating Agro-Cultural Tourism: A Product Diversification Model for Sibatana Tourism Village, Karangasem Regency. *Asian Journal of Management, Entrepreneurship and Social Science*, 4(03), 1537-1560.
- Susila, I., Dean, D., Harismah, K., Priyono, K. D., Setyawan, A. A., & Maulana, H. (2024). Does interconnectivity matter? An integration model of agro-tourism development. *Asia Pacific Management Review*, 29(1), 104-114.
- Truelove, R. N., Lellyett, S. C., Issaka, A. I., & Huda, S. (2023). Agricultural value chains in developing economies: a theoretical framework. In *Sustainable food value chain development: perspectives from developing and emerging economies* (pp. 107-152). Singapore: Springer Nature Singapore.
- Virgin, I., Diaz-Chavez, R., Morris, E. J., Haileselassie, T., Tesfaye, K., De Cliff, S., ... & Otim, M. O. (2022). The state of the bioeconomy in eastern Africa: 2022. Stockholm Environment Institute, The East African Science and Technology Commission and BioInnovate Africa.
- Wu, T. C. E., Chen, C. P., Hsu, A. Y. C., & Wall, G. (2024). Farm diversification through agritourism: innovation synergies. *International Food and Agribusiness Management Review*, 27(3), 509-525.
- Yu, H. (2025). Edible tourism landscapes: co-designing agro-tourism experiences for cultural sustainability. *Journal of Tourism and Cultural Change*, 23(6), 761-785.

Zvavahera, P., & Chigora, F. (2023). Agritourism: A source for socio-economic transformation in developing economies. *Qeios*, 1, 1-16.