

Exploring Strengthening Agricultural Productivity through Effective Project Management Strategies: Empirical Lessons from Farmers in Bukomansimbi District, Uganda

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Abstract: Over the decades there has been an increasing concern on strengthening project management and agriculture productivity in Uganda. This study examines the effectiveness of project management practices in enhancing agricultural productivity among smallholder farmers in Bukomansimbi, Uganda. The article was guided by three objectives. The study adopted a descriptive parallel mixed methodology and a case research design, coupled with pragmatists' paradigm, explanatory sequential practices. This mixed-methods design enabled collection of both quantitative and qualitative data. The combining entailed the use survey, interviews and focus group discussions. A total of 479 research participants were scientifically drawn from targeted, including farmers, extension workers, and local leaders. The selected representatives from the targeted Farmers in Bukomansimbi were cortically engaged into the study. The collected data was analysed as required. Quantitative data were analysed using descriptive statistics, while qualitative data were thematically analysed and the study observed the ethical consideration. Findings indicate that project planning significantly influences productivity, with 77.4% of farmers reporting that planning addresses their needs and 70.6% linking it to increased output, despite notable awareness gaps (38.5%). Monitoring and evaluation (M&E) practices were associated with improved outcomes, as 70.6% reported use of feedback for project improvement; however, only 44.8% indicated regular M&E implementation. Stakeholder involvement and communication emerged as critical, with 69.2% associating participation with project success. The study concludes that participatory planning, consistent M&E, and inclusive stakeholder engagement are central to improving agricultural productivity, although implementation gaps persist. It recommends institutionalizing project management guidelines, strengthening M&E systems, and promoting participatory approaches to enhance project effectiveness in Uganda.

Keywords: Agricultural Productivity, Smallholder Farmers, Monitoring and Evaluation, Stakeholder Engagement.

Introduction

The study examined the project management and Agriculture productive in Bukomansimbi Uganda. Uganda is an agribusiness country and agriculture remains the backbone of Uganda's economy, with smallholder farmers contributing substantially to food security, rural employment, and national development (Mutambara, 2025). In districts such as Bukomansimbi, most households depend on small-scale farming, cultivating crops including maize, beans, cassava, coffee, and bananas on limited land holdings (FAO, 2025). Despite sustained government and non-governmental interventions, agricultural productivity in these contexts remains persistently low, characterised by poor yields, post-harvest losses, weak market integration, and inefficient resource utilization (Kitinoja, 2025). This raises critical questions about the effectiveness of existing agricultural development approaches.

One underexplored explanation for these outcomes is the limited application of structured project management practices in agricultural interventions. While numerous initiatives—including government programmes and NGO-led projects have been implemented, many fail to achieve their intended objectives (FAAN & FAAN, 2021). Existing evidence attributes these shortcomings to weak planning processes, inadequate stakeholder engagement, poor coordination, ineffective communication, and inconsistent monitoring and evaluation (M&E) systems. Although international project management frameworks emphasise these elements as key success factors, their contextual adaptation within smallholder agricultural systems remains insufficiently understood (Oke et al., 2025).

This study responds to this gap by examining the relationship between project management practices specifically project planning, Monitoring & Evaluation, and stakeholder involvement and agricultural productivity among smallholder farmers in Bukomansimbi District. By doing so, it advances a more integrated perspective that connects managerial processes with development outcomes in agriculture (Popkova, 2025).

The study is particularly timely within Uganda's current policy context. National frameworks such as the Third National Development Plan (NDP III) and the Parish Development Model in our communities. The prioritise agricultural transformation through increased productivity and commercialization at the household level (Nations, 2020). Achieving these goals requires not

only technical agricultural interventions but also effective project management at the grassroots level. This study therefore provides relevant evidence to inform ongoing policy and implementation efforts.

This study makes several important contributions to theory. First, it bridges the gap between project management literature and agricultural development research by integrating concepts that are often treated in isolation. While prior studies have examined project success factors in general development contexts (Centobelli & Cerchione, 2022), limited attention has been given to how specific project management practices influence agricultural productivity outcomes among smallholder farmers.

Second, the study advances a contextualised understanding of project management by examining its application in a rural, resource-constrained setting. It demonstrates how core principles such as participatory planning, systematic M&E, and stakeholder engagement operate within the socio-economic realities of smallholder farming systems (Hammond et al., 2023). This contributes to refining existing project management frameworks by highlighting the importance of context-sensitive adaptation.

Third, the study provides empirical evidence linking discrete project management practices to measurable productivity outcomes (Brodie et al., 2022). By doing so, it responds to calls in the literature for more evidence-based insights into what drives project effectiveness in development settings. The findings therefore contribute to theory building on project success by extending its relevance to agricultural productivity and rural development.

The study also offers significant practical implications for policymakers, development practitioners, and local stakeholders. For policymakers, the findings provide an evidence base to support the institutionalization of project management guidelines within agricultural programmes. Strengthening frameworks for planning, M&E, and stakeholder coordination can enhance the effectiveness of national initiatives such as NDP III and the Parish Development Model (Burnett, 2024). For project implementers, including government agencies and NGOs, the study highlights the need to adopt more participatory and systematic approaches. This includes conducting thorough needs assessments, ensuring continuous farmer engagement, establishing robust M&E systems, and improving communication strategies across all project phases. Such measures can enhance project responsiveness, accountability, and impact on Uganda's sustainable development agenda.

Methodology

The study adopted a descriptive parallel mixed-methods approach, enabling the collection of both quantitative and qualitative data. This approach provided a systematic and theoretically grounded analysis of the variables under investigation (Ciccio et al., 2022). Guided by the positivist philosophical assumption, the study draws on epistemological and ontological principles that inform the research process. The integration of methods offers a transparent account of the research design and implementation, allowing readers to assess the study's credibility, reliability, and validity, as well as its potential for replication (Chatterjee, 2024).

This chapter is structured to address key methodological components. It begins with the research philosophy and paradigm, followed by the research design and justification for the mixed-methods approach. The study area is then described to provide context. Subsequent sections detail the target population, sampling procedures, data collection methods and instruments, and measures to ensure validity and reliability (Sumathi et al., 2024). This also outlines data processing and analysis techniques for both quantitative and qualitative data, addresses ethical considerations, and discusses quality assurance measures, including credibility, transferability, dependability, and confirmability.

The pragmatist paradigm is particularly suitable for this study (Omodan, 2024). The research requires both quantitative measurement of relationships between project management practices and agricultural productivity, and qualitative exploration of farmers' experiences and contextual factors. Pragmatism supports practical problem-solving, aligning with the study's aim of generating actionable insights for improving agricultural development projects. It also accommodates the complexity of agricultural systems, recognizing the role of both objective factors (Kerr et al., 2023). By adopting this paradigm, the study employs methodological pluralism to provide a comprehensive understanding of how project management influences agricultural productivity among smallholder farmers in Bukomansimbi District.

Research Design

A case research design serves as the blueprint for data collection, measurement, and analysis (Gore, 2026). This study employed a case study design within an explanatory sequential mixed-methods framework, integrating quantitative and qualitative approaches to address the research objectives comprehensively.

The combination of research design and mixed-methods approach is justified on several grounds because they enabled in-depth and clear understanding of the variables under investigation. First, it enables triangulation, enhancing the validity of findings through convergence of multiple data sources (Barlow, 2025). Quantitative survey data on project management practices and productivity are complemented by qualitative interviews and focus groups, allowing for cross-validation. Second, it supports complementarity, where qualitative insights explain and contextualize quantitative results (G. M Tymon, 2025). For instance, while quantitative analysis may identify a positive relationship between project plans and productivity, qualitative data can clarify how and why

planning influences outcomes. Third, it ensures completeness by addressing different dimensions of the research problem using appropriate methods.

The study also incorporates a cross-sectional design, with data collected at a single point in time (September 2025–January 2026). Respondents reflect on their experiences with agricultural projects over the preceding five years. Although this retrospective approach may introduce recall bias, it is appropriate for capturing recent and ongoing interventions across multiple project cycles (Denadai & Lo, 2022). While the design supports analysis of associations between variables, it does not permit definitive causal conclusions.

Additionally, the study includes descriptive and correlational elements, providing both a detailed account of project management practices and agricultural productivity, and an examination of relationships between variables (Sumathi et al., 2024). Together, these elements offer a coherent and pragmatic framework for addressing the research objectives.

Study Area

The study was conducted in Bukomansimbi District in Central Uganda, located approximately 100 km southwest of Kampala. Established in 2010 following the subdivision of Masaka District, the district covers about 485 km² and comprises three counties Bukomansimbi, Kibinge, and Kitanda further divided into sub-counties, parishes, and villages (Eastin & Dupuy, 2021) Bukomansimbi District Local Government, 2020).

Bukomansimbi has an estimated population of 165,000, with a high population density and a predominantly rural population, where over 85% of households depend on agriculture for their livelihoods. The district is characterized by limited infrastructure, relatively low education levels, and a poverty rate of about 35%.

Agriculture is the main economic activity, employing over 80% of the population. Farming is largely small-scale, with average landholdings of 0.52 hectares. Major food crops include maize, beans, cassava, sweet potatoes, and bananas (matooke), while coffee (mainly Robusta) is the primary cash crop. Livestock farming cattle, goats, pigs, and poultry is practiced on a smaller scale (Nations & A, 2025).

The district experiences a tropical climate with bimodal rainfall (March–May and September–November), receiving 1,000–1,500 mm annually, suitable for rain-fed agriculture. Soils are predominantly ferralsols, generally fertile but prone to erosion, and the terrain consists of gently rolling hills (West & Shakoor, 2018).

Over the past decade, several agricultural development initiatives have been implemented, including government programs such as Operation Wealth Creation (OWC) and NAADS, alongside interventions by NGOs and financial institutions (Bank, 2012). Despite these efforts, productivity remains below potential due to challenges such as limited access to inputs, weak extension services, climate variability, poor infrastructure, and inadequate market access.

Bukomansimbi District was purposively selected because it is representative of rural districts in Central Uganda, has hosted multiple agricultural projects, is logistically accessible, and demonstrated willingness among stakeholders to participate (Summers, 2020). These factors make it an appropriate setting for examining the role of project management in improving agricultural productivity among smallholder farmers.

Target Population

The target farmers population comprised key stakeholders involved in agricultural development projects in Bukomansimbi District. These included smallholder farmers, agricultural extension workers, district agricultural officers and project managers, and local leaders such as sub-county and parish officials.

The district has approximately 35,000 smallholder farming households, defined in this study as those cultivating less than 2 hectares and relying primarily on family labor (Ullah et al., 2024). Additionally, there are about 45 extension workers and 15 agricultural officers and project managers. Local leaders also play an important facilitative role, though the study focused on those within selected sub-counties.

Sample Size and Sampling Techniques

Sample size determination balanced statistical rigor and practical feasibility. For the quantitative component, a sample of 400 smallholder farmers was selected based on recommended guidelines for a population of 35,000 at a 95% confidence level and 5% margin of error (Taherdoost, 2016), allowing for potential non-response.

For the qualitative component, sample sizes were guided by the principle of data saturation (Sandiford & Schührer, 2025). The study targeted at least 15 key informants, including extension workers, agricultural officers, and local leaders. In addition, six focus group discussions (FGDs), each with 12 participants, were conducted, yielding qualitative insights from approximately 70 farmers.

Table 3.1 below summarizes the target population, sample sizes, and sampling techniques for each category of respondents.

Category	Target Population	Sample Size	Sampling Technique
Smallholder Farmers	35,000	400	Stratified random sampling
Extension Workers	45	8	Purposive sampling
District Officers/Managers	15	5	Purposive sampling
Local Leaders	585	6	Purposive sampling
Local Participants (Farmers)	35,000	60	Purposive sampling
TOTAL	70,645	479	,

Table 3.1: Target Population, Sample Size, and Sampling Techniques

Source: Researcher, 2025

Data Collection Methods

Data collection refers to the systematic gathering of information relevant to the research objectives using appropriate instruments and procedures (Sandiford & Schührer, 2025). This study employed multiple data collection methods to gather both quantitative and qualitative data, ensuring comprehensive coverage of the research questions. The mixed-methods approach necessitated the use of different instruments and procedures for different types of data, as described in the following sub-sections.

Data analysis techniques for both quantitative data using SPSS and qualitative data using thematic analysis were explained (Badr & Lhoussaine, 2024). Ethical considerations were thoroughly addressed, demonstrating compliance with research ethics principles. Quality assurance measures and limitations of the study were acknowledged. The methodology outlined in this chapter provides a rigorous and systematic framework for data collection and analysis, ensuring that the study produces credible, reliable, and valid findings that can meaningfully contribute to knowledge and practice regarding project management effectiveness in enhancing agricultural productivity among smallholder farmers.

Data collection refers to the systematic gathering of information relevant to the research objectives using appropriate instruments and procedures (Chakrabarti et al., 2023). This study employed multiple methods to collect both quantitative and qualitative data, ensuring comprehensive coverage of the research questions. The mixed-methods approach required the use of diverse instruments and procedures tailored to each data type, as detailed in the subsequent sections.

Data analysis techniques were clearly outlined, with quantitative data analyzed using SPSS and qualitative data examined through thematic analysis. Ethical considerations were strictly observed to ensure compliance with established research principles (Ognqnova et al., 2023). In addition, quality assurance measures were implemented, and the study's limitations were acknowledged. The overall, the methodology provides a rigorous and systematic framework for data collection and analysis, ensuring the generation of credible, reliable, and valid findings that contribute meaningfully to understanding the effectiveness of project management in enhancing agricultural productivity among smallholder farmers.

Results

The findings clearly indicate that study project planning influences agricultural productivity among smallholder farmers in Bukomansimbi District. This chapter presents findings from field research conducted among 221 farmers, with a high response rate of 88.4%, enhancing the reliability and representativeness of the results.

Demographic analysis indicates a diverse sample, characterized by relatively high educational attainment, a predominance of male respondents reflecting household headship patterns, concentration in the 45–54 age group, and substantial farming experience, with over 75% having more than three years of experience. The main crops cultivated include coffee, maize, bananas, and beans.

Findings across the study objectives show that project planning significantly influences agricultural productivity. Farmers who experienced clear communication, effective needs assessment, and participatory planning reported better outcomes (FAO, 2025). However, gaps remain in awareness and the consistency of structured planning processes.

Project monitoring and evaluation practices demonstrate mixed effectiveness. Fewer than half of the farmers reported regular M&E activities, although where implemented, these practices contributed to improved farming outcomes (Prasad & Ahuja, 2025). Stakeholder involvement and communication emerged as critical success factors, with strong positive associations observed between farmer participation, timely communication, and overall project performance.

Respondents were presented with five statements related to project planning practices, and their responses are presented in Table I.

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)
I am aware of agricultural projects planned in my area	(5.0)	(33.5)	(14.9)	(24.9)	(21.7)
Farmers are involved in planning agricultural projects	(5.0)	(6.3)	(26.2)	(33.1)	(29.4)
Project planning activities are clearly communicated	(3.2)	(10.0)	(20.3)	(50.7)	(15.8)
Planning addresses actual needs of smallholders	(3.6)	(13.6)	(5.4)	(54.8)	(22.6)
Good planning led to increased productivity	(3.2)	(11.8)	(14.4)	(54.3)	(16.3)

(Source: Project Planning and Agricultural Productivity, 2026)

The findings in Table present a mixed picture of farmers' awareness and involvement in project planning. Overall, 46.6% of respondents indicated awareness of planned agricultural projects in their area, while 38.5% were unaware and 14.9% were neutral. This suggests that although nearly half of the farmers are informed, a substantial proportion lack awareness, highlighting gaps in communication and farmer mobilization during the planning phase. This finding is consistent with previous studies in Uganda that report limited dissemination of project information to farmers (Estudillo et al., 2022).

In contrast, farmer involvement in project planning appears relatively strong, with 62.5% of respondents agreeing that farmers are involved, compared to only 11.3% who disagreed. However, the 26.2% neutral responses indicate variability in the depth and consistency of participation. Qualitative findings further reveal that although farmers are often consulted at the initial stages, their input is not always reflected in final project designs, raising concerns about the authenticity of participatory processes (Sipos, 2025).

Awareness and Communication Gaps

The finding that 38.5% of farmers are unaware of planned projects is significant, as awareness is a prerequisite for meaningful participation and project success. This aligns with evidence from agricultural programs in Uganda, such as NAADS and OWC, which have been criticized for weak communication and mobilization during planning stages (B. M. G. ., Mphale, 2021). Theoretically, this gap contradicts stakeholder and participatory development principles, which emphasize early and inclusive engagement of beneficiaries.

However, 66.5% of farmers agreed that planning activities are clearly communicated once they are reached, suggesting that the issue lies more in limited outreach than in communication quality. Qualitative insights indicate that information is often disseminated through farmer groups and local leaders, potentially excluding farmers outside these networks (Cohen et al., 2025). This highlights the need for more inclusive and diversified communication strategies.

Farmer Involvement in Planning

The finding that 62.5% of farmers perceive themselves as involved in planning is encouraging and reflects the adoption of participatory approaches in agricultural development. Such involvement enhances relevance, ownership, and effectiveness of projects, as farmers are more likely to support and sustain initiatives that address their needs (Sandiford & Schührer, 2025).

Nevertheless, the presence of neutral (26.2%) and negative (11.3%) responses indicates that participation is not uniform or always meaningful. Qualitative evidence suggests that participation is sometimes limited to consultation rather than genuine decision-making, with some farmers perceiving it as tokenistic (Idongesit et al., 2018). This underscores the need to strengthen the quality and depth of participation to ensure true co-creation of project interventions.

Needs-Based Planning and Productivity

The finding is that 77.4% of farmers agreed that project planning addresses their needs and 70.6% reported that good planning has led to increased agricultural productivity. These results strongly support the view that needs-based and well-structured planning contributes to improved outcomes. Farmers are more likely to adopt interventions that align with their priorities and farming conditions.

However, 17.2% of respondents felt their needs were not adequately addressed. These farmers often face challenges not covered by typical projects, such as land tenure insecurity, labor shortages, or severe soil degradation. Others noted a narrow focus on specific crops like coffee and maize, with limited attention to other livelihood activities. This highlights the importance of comprehensive needs assessments and context-specific interventions.

Overall, the strong association between effective project planning and increased productivity represents a significant contribution of this study. It underscores the value of investing in inclusive, well-informed, and participatory planning processes to achieve meaningful improvements in agricultural productivity among smallholder farmers (Ndhlovu, 2026).

Inconsistent Implementation of M&E Activities

The study found that only 44.8% of farmers reported that monitoring and evaluation (M&E) activities are carried out regularly, while 32.5% disagreed. This highlights a substantial gap in M&E implementation, despite its central role in project management theory for tracking progress, identifying challenges, and assessing outcomes (Nations, 2022). Weak M&E implementation aligns with broader critiques in development projects, where recognition of its importance often exceeds actual practice (FAO, 2025). Qualitative interviews revealed that M&E is frequently under-resourced, viewed as a donor compliance requirement rather than a management tool, and constrained by limited staff capacity, heavy workloads, and logistical challenges.

Farmer Involvement in M&E

Participation in M&E was slightly higher, with 53.4% of farmers reporting involvement, though nearly half remain excluded. Participatory M&E enhances ownership, enriches understanding through local knowledge, and improves accountability (Guijt, 2016; IFAD, 2020). Encouragingly, 66.1% of farmers reported that M&E findings are shared with them, though some (11.3% disagreed; 22.6% neutral) still lack access to feedback. Effective sharing of results aligns with transparency and accountability principles (Bank, 2012).

Adaptive Management and Productivity Outcomes

Most farmers (70.6%) agreed that M&E feedback is used to improve project implementation, supporting theoretical claims that M&E fosters adaptive management (Bamberger et al., 2019). Feedback enables mid-course corrections, resource reallocation, and scaling of effective interventions (IFAD, 2020). However, 29.4% of respondents were neutral or disagreed, indicating that M&E is not universally leveraged for adaptive management. Factors such as organizational inertia, limited budgets, and donor constraints can impede action on M&E findings (Patton, 2018). Notably, 61.5% of farmers agreed that M&E has helped improve their farming practices, providing empirical evidence that M&E contributes directly to agricultural productivity.

Stakeholder Involvement and Communication

The findings of study also examined stakeholder engagement and communication. Overall, 58.4% of farmers reported adequate involvement in project implementation, while 24.9% disagreed. This suggests progress toward participatory approaches, consistent with global trends that view farmers as active partners rather than passive recipients (Cornwall, 2016; Chambers, 2017). Participation enables farmers to adapt interventions, contribute resources, and sustain practices (Cleaver, 2017). Nonetheless, variability exists across projects, influenced by project design, farmer organizational capacity, and staff facilitation skills.

Regarding communication, 59.7% of farmers agreed that project implementers provide clear and timely information, though 40.3% were neutral or disagreed. Effective communication ensures understanding of objectives, activities, input schedules, and allows farmers to provide feedback (Nations, 2022). Challenges include language barriers, reliance on mobile phones, infrequent face-to-face interactions, and inconsistent messages from multiple implementing agencies. Encouragingly, 61.5% found communication methods appropriate and understandable, particularly where visual aids, community meetings, and local language materials were used (Kiptot & Franzel, 2019).

Multi-Stakeholder Coordination

Only 44.3% of farmers reported active involvement of local leaders and agricultural officers in project implementation, with 35.8% neutral and 19.9% disagreeing. Variability in engagement reflects differences in project approaches, limited resources, and political considerations. Local leaders and officers can play critical roles in mobilization, contextual guidance, and coordination with government plans (Fleming-May & Mays, 2021). Strengthening multi-stakeholder collaboration is vital, as agricultural development is most effective when farmers, extension workers, researchers, input suppliers, traders, local government, and civil society work together in a coordinated system (B. M G. ., Mphale, 2021).

Stakeholder Engagement and Project Success

A key finding is that 69.2% of farmers agreed that stakeholder involvement contributes to more successful agricultural project outcomes. This provides strong empirical support for stakeholder theory and participatory development approaches, demonstrating that farmer participation, clear communication, and multi-stakeholder coordination are associated with tangible improvements in project effectiveness (FAO, 2025), (Young, 2026). Investments in stakeholder engagement—through consultations, communication, and relationship-building—yield measurable returns in project performance.

However, 21.7% of farmers disagreed, suggesting that engagement is not universally effective. Qualitative data indicate that tokenistic or manipulative participation, where farmer input is ignored, can generate frustration and undermine project legitimacy (Estudillo et al., 2022). Excessive engagement activities may also divert time and resources from productive work. These findings underscore that stakeholder engagement must be genuine, purposeful, and well-designed, rather than a box-ticking exercise.

Cross-Cutting Themes and Integrated Insights

Several themes emerged that integrate the study's findings across project management dimensions:

1. Interconnectedness of Project Management Functions: Project planning, M&E, and stakeholder engagement are deeply linked. Effective planning relies on stakeholder input to address needs, M&E depends on clear plans to set baselines and targets, and stakeholder communication supports both planning and M&E. Projects strong in one dimension tend to perform well across others, validating the integrated project management approach outlined in the PMBOK framework (Young, 2026).

2. Resource Constraints: Inadequate funding, staff shortages, and transportation challenges limit M&E frequency, extension worker-farmer interactions, communication, and adaptive management. These constraints are widespread in Uganda and other low-income countries and represent a major barrier to high-quality project management (Woldegiorgis et al., 2024).

3. Rhetoric and Reality in Participation: While participatory approaches are increasingly adopted, the depth and genuineness of farmer involvement vary. Some farmers still experience top-down or tokenistic participation, echoing critiques about the "tyranny of participation" (Helmcke, 2023).

4 Importance of Context and Heterogeneity: Smallholder farmers differ in education, gender, age, experience, land size, crops, and market access. Projects effective for some farmers may not suit others, highlighting the need for context-specific, tailored interventions rather than one-size-fits-all approaches (Chambers, 2017).

Discussion

The findings demonstrate that project planning is not merely an administrative precursor to agricultural intervention but a substantive determinant of agricultural productivity among smallholder farmers in Bukomansimbi District. The evidence shows that 77.4% of respondents agreed that project planning addresses their actual needs, while 70.6% affirmed that good planning has contributed to increased agricultural productivity. This finding suggests that productivity is partly a function of the extent to which agricultural interventions are conceived around the lived realities, aspirations and constraints of farmers rather than being imposed through externally predetermined project templates (Kerr et al., 2023).

Philosophically, this finding challenges the traditional technocratic conception of development, in which experts are presumed to possess superior knowledge and beneficiaries are positioned primarily as recipients of interventions. A more human-centred epistemology recognises that farmers possess situated knowledge derived from continuous interaction with soils, seasons, crops, livestock, markets, labour systems and local ecological conditions (Kahan & Worth, 2026). Consequently, effective project planning should be understood as a process of knowledge co-production, in which technical knowledge and indigenous or experiential knowledge interact.

The finding that 62.5% of farmers reported being involved in project planning provides evidence of movement towards such participatory development. However, the 26.2% neutral response and qualitative evidence that farmers' views are not always incorporated into final project designs reveal an important philosophical contradiction: participation may exist procedurally without existing substantively.

This distinction is crucial. Genuine participation is not simply being present at a meeting or responding to a consultation exercise; it involves having a meaningful capacity to influence decisions (Change (IPCC), 2022). In this sense, the findings resonate with critiques of tokenistic participation. The philosophical implication is that development projects should move from a "doing for farmers" paradigm towards a "thinking and acting with farmers" paradigm. Farmer participation becomes ethically meaningful only when farmers possess voice, agency and some degree of decision-making power.

2. Awareness, Communication and the Ethics of Inclusion

The study reveals an important paradox: while 66.5% of respondents agreed that planning activities are clearly communicated when information reaches them, 38.5% indicated that they were unaware of agricultural projects planned in their areas. This suggests that

the central problem may not necessarily be the quality of communication, but the reach, inclusiveness and accessibility of communication systems.

From a philosophical perspective, communication is more than the transmission of information. It is an instrument through which people acquire the capacity to understand, deliberate and act (Dillon, 2023). A farmer who does not receive information about a project cannot meaningfully participate in its planning, implementation or evaluation. Thus, informational exclusion becomes a form of participatory exclusion.

This finding therefore raises an ethical question concerning distributive justice: Who gets to know, who gets to participate, and whose knowledge is recognised? If information is predominantly disseminated through farmer groups and local leaders, farmers outside these networks may become structurally disadvantaged. Agricultural project management therefore has an ethical obligation to design communication systems that reach marginalised, isolated and less-organised farmers (Valarie, 2019).

The philosophical lesson is that inclusive communication is a condition of agricultural justice. Project managers should not assume that information has reached farmers merely because it has been transmitted through one channel. Effective communication should be multidirectional, locally intelligible, culturally appropriate and capable of generating feedback.

3. Needs-Based Planning and the Human Meaning of Productivity

The finding that 77.4% of respondents considered agricultural planning responsive to their needs provides strong evidence for needs-based project management. Yet the 17.2% who disagreed indicate that agricultural interventions do not necessarily accommodate the full complexity of smallholder livelihoods.

The philosophical significance lies in how agricultural productivity itself is conceptualised. Productivity should not be reduced narrowly to increased crop yields as advanced in (Estudillo et al., 2022). For smallholder farmers, meaningful productivity may encompass food security, household income, resilience to climate variability, employment, nutritional security, reduced production risks and the capacity to sustain livelihoods across generations.

The findings concerning land tenure insecurity, labour shortages, soil degradation and the concentration of some interventions on crops such as coffee and maize reinforce this broader conception. A project may therefore achieve its predetermined output while failing to transform the underlying conditions that constrain farmers' freedom to prosper.

This invites an Aristotelian interpretation of development: development should ultimately concern human flourishing rather than the mere accumulation of outputs (Miles, 2026). Agricultural projects should consequently be evaluated according to whether they expand farmers' substantive capabilities to produce, innovate, adapt and live sustainable livelihoods. Productivity becomes meaningful when it contributes to human flourishing and community wellbeing.

4. Monitoring and Evaluation as a Philosophy of Learning

The findings reveal a significant weakness in project monitoring and evaluation (M&E). Only 44.8% of farmers reported that M&E activities were conducted regularly, while 32.5% disagreed. This is particularly important because M&E represents the mechanism through which project assumptions are tested against reality.

Philosophically, M&E should not be understood simply as an accountability mechanism imposed by donors. It should constitute a philosophy of organisational learning. A project that does not systematically examine what is working, what is failing and why risks continuing to reproduce ineffective practices (Edwards, 2023).

The finding that 70.6% of farmers believed M&E feedback was used to improve implementation and 61.5% reported improvements in their farming practices indicates that M&E has transformative potential when feedback is converted into action. The fundamental philosophical movement is therefore from M&E as surveillance towards M&E as reflection and learning. In this regard, effective project management becomes an iterative epistemological process:

Such a cycle recognises that agricultural environments are dynamic and uncertain (Lioutas et al., 2026). Weather, pests, markets, household labour, prices and ecological conditions cannot always be predicted during project design. Consequently, good project management requires epistemic humility—the recognition that project managers cannot know everything in advance.

5. Farmer Participation in Monitoring and Evaluation

The finding that 53.4% of farmers participated in M&E, while 66.1% indicated that M&E findings were shared with them, demonstrates partial movement towards participatory accountability. Nevertheless, the exclusion of almost half of farmers from M&E raises concerns about whose experiences are represented in assessments of project success.

Philosophically, participatory M&E challenges the assumption that project success can be adequately determined by external experts. Farmers are not simply objects of evaluation; they are subjects capable of interpreting change within their own contexts (Hu, 2022). Such a transformation has epistemological importance because farmers may identify outcomes, unintended effects and

implementation problems that formal indicators fail to capture. Participatory M&E therefore democratises knowledge production and strengthens accountability.

6. Stakeholder Engagement, Social Capital and Project Success

The finding that 69.2% of respondents believed stakeholder involvement contributes to successful agricultural project outcomes provides strong support for a relational conception of project management. Agricultural productivity is not generated by farmers operating in isolation as contended in (Institute, 2014). It emerges from relationships among farmers, extension workers, researchers, local authorities, input suppliers, traders, development organisations and other actors.

The philosophical implication is that agricultural development is fundamentally relational. A farmer may possess land and labour but remain unproductive because of inadequate extension services, poor access to inputs, weak markets, limited finance or insufficient information. Productivity therefore emerges partly from the quality of the social and institutional environment surrounding production. However, the 21.7% disagreement concerning the value of stakeholder engagement is equally significant. It indicates that simply increasing the number of stakeholders does not automatically improve project outcomes. Stakeholder engagement becomes productive only when it is purposeful, respectful and connected to decision-making (Palaniandy, 2025).

Thus, the study supports a quality-over-quantity principle of participation: meaningful engagement is more important than the number of meetings, consultations or stakeholders involved.

7. Multi-Stakeholder Coordination and the Fragmentation of Agricultural Development

Only 44.3% of farmers reported active involvement of local leaders and agricultural officers, while 35.8% were neutral and 19.9% disagreed. This finding points towards institutional fragmentation in agricultural project implementation.

From a philosophical and governance perspective, fragmentation represents a failure to recognise agriculture as a systemic phenomenon. Farmers exist simultaneously within economic, ecological, social, political and institutional systems (Bhat, 2026). Consequently, isolated interventions may produce limited or temporary benefits.

The implication is that agricultural projects require integrative governance, in which local government, farmers, researchers, private actors, civil society and development agencies coordinate their interventions. Such coordination can reduce duplication, improve resource utilisation and create stronger pathways between production, processing, markets and household welfare.

8. Resource Constraints and the Philosophy of Development Under Scarcity

The study identifies inadequate funding, staff shortages and transportation constraints as important barriers to effective M&E, extension interaction, communication and adaptive management. These constraints reveal an important reality: project management theories developed around ideal institutional conditions may encounter very different realities within rural Uganda.

Philosophically, this raises the question of what constitutes good management under conditions of scarcity (Prudent et al., 2019). Effective management cannot simply mean applying sophisticated procedures; it requires the capacity to prioritise, innovate and adapt when resources are limited.

Scarcity may therefore stimulate locally appropriate innovation. Rather than treating farmers as beneficiaries of externally supplied solutions, projects can strengthen locally available knowledge, social networks, collective action and community resources (Change (IPCC), 2022). This corresponds to a capability-oriented approach, where development focuses not merely on providing resources but on strengthening people's capacity to mobilise and utilise available resources effectively.

9. From Project Delivery to Human Agency

Taken together, the findings suggest that the fundamental issue in agricultural project management is not simply whether projects are implemented according to plan. The deeper question is whether projects strengthen farmers' agency and capacity to shape their own agricultural futures.

The study demonstrates that planning, M&E, communication and stakeholder engagement are interconnected rather than independent management functions. Effective planning requires farmer knowledge; implementation requires communication and stakeholder coordination; M&E generates learning; and learning should feed back into subsequent planning (Organization, 2023).

The findings therefore support a cyclical and human-centred philosophy of project management: This cycle moves beyond the conventional project logic of inputs towards a deeper transformation in which farmers become co-creators, knowledge holders, decision-makers and agents of agricultural development.

Conclusion

Project planning strongly influences agricultural productivity. Clear communication, farmer involvement, needs-based design, and appropriate resource allocation are associated with improved outcomes (Nations, 2022). Thorough needs assessments and participatory goal-setting enable farmers to adopt practices that address their constraints and opportunities. Nevertheless, gaps

remain: many farmers are unaware of planned projects, excluded from planning, or receive interventions that inadequately address their needs.

Monitoring and Evaluation (M&E)

When implemented systematically, M&E enhances adaptive management, accountability, and learning, improving agricultural outcomes (Estudillo et al., 2022). Farmers involved in M&E, receiving feedback, and observing adaptive actions report better farming practices. Yet M&E remains inconsistent: many farmers experience infrequent monitoring, limited participation, or lack of feedback. Strengthening M&E systems offers substantial gains without necessarily requiring major additional resources.

Stakeholder Involvement and Communication

Active participation, clear and timely communication, appropriate communication methods, and multi-stakeholder coordination are strongly linked to project success. However, the quality of engagement varies, with some farmers experiencing inadequate involvement or poor communication. Strengthening these mechanisms is critical for enhancing project effectiveness.

Agricultural Productivity

The study demonstrates that the management of agricultural projects from planning to M&E to stakeholder engagement—directly affects productivity outcomes for smallholder farmers. The three dimensions are interconnected and mutually reinforcing: effective planning requires stakeholder input, M&E relies on clear plans and feedback, and stakeholder engagement is facilitated by planning and M&E (Fisher et al., 2021). Projects that excel across all three dimensions achieve substantially better results. While progress has been made in applying project management principles in Bukomansimbi District, significant gaps remain. Addressing these gaps through systematic improvements offers a tangible opportunity to boost agricultural productivity, support food security, and reduce rural poverty in Uganda.

Recommendations

Based on the study findings, discussion, and conclusions, the following recommendations are made to relevant stakeholders to enhance agricultural project management and productivity among smallholder farmers in Bukomansimbi District. Each recommendation is practical, actionable, and evidence-based.

1. The article recommends that the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) should develop practical, context-specific guidelines for agricultural project management. These guidelines should cover all key dimensions, including project planning, monitoring and evaluation (M&E), and stakeholder engagement, and be tailored to the realities of smallholder farming. Institutionalizing these guidelines through training programs for extension workers, project managers, and district agricultural officers will ensure consistent application and improve project effectiveness. Compliance should be monitored through national and district supervision systems.
2. The study recommends that, Government of Uganda should ensure that agricultural programs allocate sufficient resources to project management functions, particularly planning and M&E, which are often underfunded. A recommended minimum of 5–7% of total project budgets should be dedicated to M&E activities, including baseline surveys, regular monitoring visits, farmer consultations, and impact evaluations. District governments should also provide extension workers with adequate transportation, communication tools, and operational resources to carry out planning and monitoring effectively.
3. The article recommends that Bukomansimbi District local governments should establish or strengthen agricultural sector coordination platforms that bring together government agencies, NGOs, farmer organizations, private sector actors, and development partners. These platforms should meet regularly to share information, coordinate activities, avoid duplication, and leverage complementary resources. Clear standard operating procedures (SOPs) for stakeholder coordination should be developed and enforced to ensure sustained collaboration across projects.
4. The study further recommends that the National and district agricultural policies should require genuine farmers engagement at all stages of agricultural projects, from planning to evaluation. Policies should define minimum standards for consultation and involvement, including participatory needs assessments, representation in project governance structures, and mechanisms for providing feedback. Implementation should be monitored and enforced to ensure that participation goes beyond tokenism and contributes to project relevance and ownership.
5. The study also recommends that, government of Uganda and development partners should invest in capacity building the project management capacity of extension workers, district agricultural officers, and farmer group leaders. Training should cover project planning, M&E, stakeholder engagement, and adaptive management. Practical learning approaches, including mentorship and peer learning, should be incorporated. Certification programs or professional standards for agricultural project managers could further enhance accountability and ensure that projects are managed effectively.

6. The article further recommends that, Smallholder farmers in Bukomansimbi and project teams should invest time and resources in thorough needs assessments to identify priority problems, constraints, and opportunities. Assessments should go beyond superficial consultations to analyze farming systems, household livelihoods, market conditions, and institutional contexts. The findings must genuinely inform project design, ensuring that interventions respond to farmers' actual needs rather than pre-determined agendas.

7. The study recommends that Farmers Project managers should establish M&E systems from the start, with clearly defined indicators, baseline data, tools, responsibilities, and schedules. Participatory approaches should involve farmers as active contributors in defining indicators, collecting and analyzing data, and interpreting results. Regular M&E findings should be shared with farmers and used to guide adaptive management, improving project implementation and farming outcomes. Formal mechanisms for farmer participation in project governance, such as advisory panels or steering committees with decision-making authority, should be established and resourced.

8. Lastly the study recommends that, Farmers Projects managers should recognize the heterogeneity of smallholder farmers and tailor interventions accordingly. Differences in gender, educational levels, crops grown, farm size, and location require flexible and adaptive approaches. Projects should prioritize context-specific solutions that respond to local conditions, rather than applying uniform strategies, to maximize relevance, adoption, and agricultural productivity.

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