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The Influence of Farmer Group Management on the Success of the Integrated Farming Programme

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ABSTRACT
This study examines the influence of farmer group management on the success of integrated farming programmes in Indonesia, addressing the limited empirical evidence on how specific management dimensions affect programme outcomes. A quantitative survey approach was applied involving 222 respondents from 10 farmer groups across five sub-districts, selected based on commodity type, partnership patterns, and access to extension services. Data were collected using a structured questionnaire measuring farmer group management dimensions—planning, coordination, division of tasks, and evaluation—and programme success indicators, including productivity, sustainability, and member satisfaction. Descriptive statistics and multiple linear regression analysis were employed to analyse the data. The results show that farmer group management practices are generally perceived as good to very good. Regression analysis indicates that coordination has a significant positive effect on the success of integrated farming programmes (B = 0.28; p = 0.001), highlighting the importance of effective collaboration among group members. These findings provide empirical support for strengthening farmer group management to enhance programme effectiveness, promote agribusiness sustainability, and improve farmers' welfare. The study offers practical implications for policymakers and stakeholders in developing community-based agricultural development strategies.

Keywords: farmer group management; integrated farming programme; programme success; productivity; sustainability.

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1. Introduction

Integrated farming has been mphasizin as as a strategic approach to optimising agricultural resources in order to support food security and agribusiness sustainability. This approach emphasises the integration of various farming components to improve productivity, efficiency, and environmental sustainability. In this context, farmer groups play a crucial role in the successful implementation of integrated farming programmes by facilitating collective action, information sharing, and joint resource management among farmers [1,2].

Effective farmer group management involves strategic planning, clear division of tasks, coordination, and systematic evaluation. Previous studies have demonstrated that strong managerial capabilities within agricultural organisations significantly improve performance and programme outcomes [2]. In addition, structured agricultural extension services contribute to increased farmer productivity through capacity building and technology transfer [3].

Partnerships between farmer groups and external institutions, such as cooperatives and government agencies, are also recognised as important success factors. Support in the form of training, access to production facilities, and market assurance has been shown to improve the performance and sustainability of farming activities [1]. Furthermore, technology adoption at the farmer group level has been reported to enhance production efficiency and agribusiness competitiveness [4].

Despite these advantages, farmer groups continue to face significant challenges, including limited access to training, financial resources, and institutional support. Weak human resource management and insufficient continuous training may reduce the effectiveness of programme implementation [5]. In addition, limited access to credit and inadequate collaboration with local authorities often constrain innovation and the long-term sustainability of integrated farming programmes [1,6].

Although previous studies have examined farmer group performance, partnerships, and technology adoption, empirical research that simultaneously analyses the influence of specific farmer group management dimensions—namely planning, coordination, division of tasks, and evaluation—on the success of integrated farming programmes remains limited. Most existing studies focus on individual aspects of farmer organisations or production outcomes rather than providing a comprehensive management perspective. This gap highlights the need

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for an integrated analysis of internal management practices within farmer groups and their contribution to programme success.

Therefore, this study aims to examine the influence of farmer group management on the success of integrated farming programmes in Indonesia. The findings are expected to provide empirical evidence to support the development of effective community-based agricultural policies aimed at improving farmers' welfare and promoting sustainable agribusiness development.

2. Materials and Method

Research Design and Study Area

This study employed a quantitative research design using a survey method to examine the influence of farmer group management on the success of integrated farming programmes. The survey approach was selected to enable statistical analysis of relationships between management dimensions and programme outcomes.

The research was conducted in five sub-districts in Indonesia where integrated farming programmes have been actively implemented. The study areas were selected based on three criteria: (1) the dominant agricultural commodity cultivated, (2) existing partnership patterns with cooperatives or external institutions, and (3) the level of access to agricultural extension services.

Population and Sampling Technique

The population consisted of 500 members from 10 farmer groups operating in the selected sub-districts. A purposive sampling technique was applied to ensure that respondents possessed relevant knowledge and direct involvement in farmer group management and programme implementation. Therefore, the respondents included farmer group leaders, secretaries, and active members engaged in planning, coordination, task division, and evaluation activities.

The sample size was determined using the Slovin formula with a margin of error of 5%, as expressed in Equation (1):

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

where n is the sample size, N is the population size (500), and e is the margin of error (0.05). Based on this calculation, a total of 222 respondents were selected.

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Research Instrument and Variables

Data were collected using a structured questionnaire. The independent variables consisted of farmer group management dimensions, including planning, coordination, division of tasks, and evaluation. The dependent variable was the success of the integrated farming programme, measured through productivity, sustainability, and member satisfaction indicators.

Prior to the main survey, the questionnaire was tested for validity and reliability through a pilot study involving 30 respondents from farmer groups outside the research sample. All measurement items met the minimum validity and reliability requirements.

Data Collection Procedure

Primary data were collected through face-to-face surveys conducted by trained enumerators to ensure accuracy and completeness of responses. In addition, in-depth interviews were conducted with five farmer group leaders to obtain supporting qualitative insights related to management practices, challenges, and programme success factors.

Data Analysis

Data analysis was performed using descriptive and inferential statistical methods. Descriptive statistics were used to summarise respondent characteristics and variable distributions. Inferential analysis was conducted using multiple linear regression to assess the influence of each farmer group management dimension on the success of integrated farming programmes. Correlation analysis was also performed to examine relationships among variables. All statistical analyses were conducted using SPSS software. The significance level was set at 5%.

3. Result

Distribution of Farmer Group Management and Programme Success

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Table 1. Distribution of Farmer Group Management Variables and Programme Success Indicators

Variable	Category	Frequency (f)	Percentage (%)
Planning	Very good	90	40.5
	Good	80	36.0
	Fair	50	22.5
	Poor	2	1.0
Coordination	Very good	100	45.0
	Good	85	38.3
	Fair	35	15.7
	Poor	2	1.0
Division of tasks	Very clear	110	49.5
	Fairly clear	90	40.5
	Not clear	22	10.0
Evaluation	Very good	115	51.8
	Good	80	36.0
	Fair	27	12.2
Productivity	High	130	58.6
	Medium	70	31.5
	Low	22	9.9

Based on Table 1, most respondents rated farmer group management aspects, including planning, coordination, division of tasks, and evaluation as good to very good. Among the programme success indicators, productivity was predominantly classified as high, indicating that integrated farming programmes were generally implemented effectively by the farmer groups.

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Multiple Linear Regression Analysis

Table 2. Results of Multiple Linear Regression Analysis of Farmer Group Management on Programme Success

Independent Variable	Regression Coefficient (B)	t-value	p-value
Planning	0.35	4.25	<0.001
Coordination	0.28	3.85	0.001
Division of tasks	0.22	2.95	0.004
Evaluation	0.40	5.50	<0.001
Constant	1.12	–	–
R^2	0.68	–	–

The regression results indicate that all farmer group management variables have a significant positive influence on the success of integrated farming programmes. Planning significantly affected programme success (B = 0.35, $p < 0.001$), indicating that better planning contributes to higher programme effectiveness. Coordination also showed a significant positive effect (B = 0.28, p = 0.001), highlighting the importance of cooperation among group members.

The division of tasks had a positive and significant includenfluence on programme success (B = 0.22, p = 0.004), although its effect size was smaller compared to planning and evaluation. Evaluation emerged as the most influential variable (B = 0.40, $p < 0.001$), mphasizing the importance of regular monitoring and assessment. The coefficient of determination ($R^2 = 0.68$) indicates that 68% of the variation in programme success is explained by the farmer group management variables, while the remaining 32% is influenced by other factors not included in the model.

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In-Depth Interview Findings

Table 3. Summary of in-depth interview results with farmer group leaders

Theme	Representative Quotes
Challenges	"Coordination is often a problem, especially when there are differences in views among group members."
	"Limited access to technology and information often hampers programme management."
	"Budget constraints are a major obstacle, as many programmes require substantial funding."
Success Factors	"Good cooperation among members and a clear division of tasks are very helpful."
	"Extension services and training from government or external partners greatly increase programme effectiveness."
	"Regular evaluation helps us identify problems and address them quickly."

The in-depth interviews revealed that the main challenges faced by farmer groups include coordination issues, limited access to technology, and budget constraints. Nevertheless, respondents identified cooperation among members, external support through extension and training, and regular evaluation as key factors contributing to the success of integrated farming programmes.

4. Discussion

The Role of Planning in Programme Success

The findings indicate that planning plays an important role in supporting the success of integrated farming programmes. Effective planning provides a strategic framework that guides farmer groups in organising activities, allocating resources, and anticipating potential challenges. Rather than merely serving as an administrative requirement, planning functions as a tool for aligning group objectives with available capacities and external opportunities.

This result is consistent with previous studies highlighting the importance of strategic planning in agribusiness organisations to improve sustainability and operational efficiency [7]. Strategic planning practices, including stakeholder

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involvement and managerial support, have been shown to significantly enhance organisational performance [8]. In the context of farmer groups, participatory planning encourages member involvement, strengthens commitment, and fosters collective responsibility for programme outcomes.

However, effective planning depends heavily on access to accurate data and information. Limited access to market information, technological knowledge, or extension services may reduce planning quality. Therefore, strengthening analytical skills among farmer group leaders and improving access to reliable information are essential to enhance planning effectiveness.

Coordination as a Key Mechanism for Collective Action

Coordination among farmer group members emerged as a critical factor in ensuring programme success. Effective coordination facilitates cooperation, reduces operational overlap, and ensures that group activities are implemented in a coherent and timely manner. In integrated farming systems, where activities are interrelated, coordination becomes particularly important to achieve synergy among different farming components.

This finding supports earlier research emphasising the role of democratic and participatory coordination in strengthening cooperation within farmer groups [9]. Clear communication and institutional arrangements have also been identified as essential elements for successful agricultural programme implementation [10]. Well-coordinated groups are better equipped to manage internal differences and respond collectively to external challenges.

Nevertheless, coordination effectiveness may be constrained by variations in educational background, experience, and perspectives among group members. To address these challenges, capacity-building initiatives focusing on communication skills and conflict management are necessary to strengthen internal coordination mechanisms.

Division of Tasks and Organisational Effectiveness

The division of tasks within farmer groups contributes positively to programme implementation by improving work efficiency and reducing role ambiguity. When

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responsibilities are assigned according to members' competencies, farmer groups can operate more effectively and minimise internal conflict.

Previous studies have shown that active participation of group members in task allocation and implementation positively influences farmer group performance [11]. Similarly, clear task-sharing arrangements have been associated with improved entrepreneurial behaviour in agricultural groups [12]. These findings suggest that an effective organisational structure is essential for sustaining collective action.

Beyond technical competence, the success of task division also depends on members' willingness to assume responsibility. Continuous training and skills development are therefore important to enhance both technical capacity and commitment among farmer group members.

Evaluation as a Driver of Continuous Improvement

Evaluation was identified as the most influential management dimension in supporting programme success. Regular evaluation enables farmer groups to monitor progress, identify constraints, and implement corrective actions in a timely manner. Through evaluation, farmer groups can ensure that programme activities remain aligned with planned objectives.

This finding is consistent with previous research demonstrating a strong relationship between evaluation practices, member participation, and the performance of smallholder farmer groups [13]. Transparent evaluation processes also promote accountability and strengthen trust among group members.

However, the implementation of systematic evaluations may be limited by resource constraints, including time, labour, and financial capacity. To address these limitations, the adoption of simple digital tools and record-keeping systems can support data collection and analysis, allowing farmer groups to conduct effective evaluations without excessive resource demands.

5. Conclusions

This study demonstrates that farmer group management plays a crucial role in determining the success of integrated farming programmes. Management dimensions including planning, coordination, division of tasks, and evaluation were found to have a significant influence on programme performance, confirming the

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study's objective to examine the contribution of internal management practices to programme success.

Effective and structured planning provides a strategic foundation that enables farmer groups to optimise available resources, anticipate potential risks, and align programme activities with collective goals. Coordination, supported by clear communication and leadership, enhances cooperation among members and contributes to improved productivity and operational efficiency. Furthermore, a clear and fair division of tasks fosters a productive working environment, reduces internal conflict, and strengthens members' sense of responsibility.

Among the management dimensions examined, evaluation emerged as the most influential factor. Regular and structured evaluation allows farmer groups to monitor progress, identify weaknesses, and implement continuous improvements to ensure programme sustainability. In addition, external support—such as training, extension services, and access to technology—remains essential to strengthen farmer group management capacity.

Overall, the findings confirm that the success of integrated farming programmes depends not only on technical farming practices but also on the quality of internal farmer group management, supported by external collaboration. This integrated approach contributes to improved productivity, programme sustainability, and the enhancement of farmers' welfare, providing valuable insights for policymakers and stakeholders involved in community-based agricultural development.

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