THE ROLE OF FAMER GROUPS IN INCREASING THE PRODUCTIVITY OF RICE FARMING BUSINESSES IN BARU VILLAGE

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Keywords:
Farmer groups, Productivity Rice Farming, Desa Baru

Abstract

This study aims to analyze the role of farmer groups in improving the productivity of rice farming in Desa Baru, Batang Kuis Subdistrict, Deli Serdang Regency. The research employs a descriptive method with a quantitative approach. Data were collected through observation, interviews, and questionnaires involving 40 respondents selected randomly from active farmer group members. The results show that farmer groups play significant role as learning classes, collaboration platforms, and production units, with index scores of 81%, 70%, and 73% respectively. Chi-Square analysis indicates a significant relationship between the role of farmer groups and rice farming productivity , with an average yield of 5.74 tons/ha, categorized as moderate. Optimizing the role of farmer groups can serve as the best way to enhance agricultural productivity.

INTRODUCTION

Indonesia, as an agrarian nation, relies heavily on its agricultural sector, which serves as a fundamental source of livelihood and a cornerstone of national economic development. According to the Central Bureau of Statistics (BPS, 2023), approximately 40.64 million Indonesians were employed in agriculture, forestry, and fisheries as of 2022. Among the agricultural commodities, rice holds strategic importance as the primary staple crop. Its production requires serious attention, including the adoption of advanced agricultural technologies, improved resource management, and effective stakeholder collaboration (Handayani, 2019).

Farmer groups play a critical role in enhancing the productivity of rice farming by acting as platforms for learning, collaboration, and production. These groups empower farmers through the exchange of knowledge, provision of resources, and implementation of innovative farming practices. However, challenges such as limited access to modern technology, high costs of inputs, and inadequate organizational capacity remain significant barriers to optimizing agricultural output (Tambunan, 2018).

The primary objectives of this study are twofold: first, to evaluate the roles of farmer groups as learning platforms, collaboration facilitators, and production units in Desa Baru, Batang Kuis Subdistrict, Deli Serdang Regency; and second, to analyze the relationship between these roles and rice farming productivity. By achieving these objectives, the research aims to provide actionable insights into strengthening farmer group functions, ultimately contributing to sustainable agricultural development.

METHODS

This study employed a descriptive research design with a quantitative approach to analyze the role of farmer groups in enhancing rice farming productivity in Desa Baru, Batang Kuis Subdistrict, Deli Serdang Regency. The methodology is outlined as follows: he research was conducted in Desa Baru, located in the Batang Kuis Subdistrict, Deli Serdang Regency, a region known for its reliance on rice farming. Data collection took place in October 2024. The study population comprised all members of active farmer groups in Desa Baru. Using simple random sampling, 40 respondents were selected to represent this population. This sampling

technique ensures equal representation and eliminates selection bias. Data Collection Methods by observation: Field visits were conducted to observe farming practices, group activities, and agricultural outcomes. Interviews: Structured interviews were conducted with farmer group members and local agricultural facilitators to gather qualitative insights.Questionnaires: A structured questionnaire was administered to collect quantitative data on farmer group roles and productivity levels.

The data were analyzed using descriptive statistics and inferential methods. Descriptive Analysis: To describe the roles of farmer groups as learning platforms, collaboration facilitators, and production units. Chi-Square Test: To examine the relationship between the roles of farmer groups and rice farming productivity. Index Scoring: To measure the contribution of farmer group roles to productivity improvements. Operational Definitions of Variables is Independent Variable: Roles of farmer groups categorized as learning platforms, collaboration facilitators, and production units. Dependent Variable: Rice farming productivity measured in tons per hectare.

RESULTS AND DISCUSSION

Results

The study revealed that farmer groups in Desa Baru play significant roles in improving the productivity of rice farming. These roles are categorized into three key functions:

1. Learning Platforms: Farmer groups served as a medium for farmers to gain knowledge and improve their skills. The index score for this function was 81%, indicating high effectiveness in facilitating education and training.
2. Collaboration Platforms: The groups facilitated cooperation among members, promoting collective decision-making and resource sharing. The index score for this aspect was 70%, demonstrating moderate success in fostering teamwork and collaboration.
3. Production Units: Farmer groups supported members in accessing inputs, utilizing technologies, and optimizing farming techniques. This function also scored 73%, reflecting a positive impact on production processes.

The Chi-Square analysis indicated a statistically significant relationship between the roles of farmer groups and rice farming productivity. The average productivity was 5.74 tons per hectare, classified as moderate. The findings highlight that effective farmer group management positively correlates with productivity enhancements.

DISCUSSION

The discussion emphasized the need to optimize farmer group functions further by improving access to modern technologies, providing financial support, and strengthening the organizational capacity of groups. Addressing barriers such as high input costs and limited market access can significantly enhance the overall impact of farmer groups on agricultural productivity.

CONCLUSION

The study concludes that farmer groups in Desa Baru play a critical role in enhancing the productivity of rice farming. Their functions as learning platforms, collaboration facilitators, and production units contribute significantly to improving farming practices and outcomes. A strong, positive relationship exists between the roles of farmer groups and rice farming productivity, with an average productivity of 5.74 tons per hectare, categorized as moderate. This demonstrates the importance of optimizing farmer group activities to achieve sustainable agricultural development.

ACKNOWLEGMENT

The authors are grateful to the Farmer Groups of Baru Village and the Universitas Medan Area for their support and funding of this research programme.

REFERENCES

Badan Pusat Statistik (BPS). (2023). *Statistical data on agriculture, forestry, and fisheries in Indonesia*. Jakarta: BPS.

Damayanti, R. (2017). The role of farmer groups in rural development: A case study. *Journal of Agrarian Studies*, 12(3), 45–59.

Dinas Pertanian. (1997). *Guidelines for farmer group development*. Jakarta: Ministry of Agriculture.

Djiwandi, S. (1994). Farmer organizations and their role in agricultural transformation. *Indonesian Journal of Agricultural Economics*, 6(2), 22–35.

Handayani, S. (2019). The strategic importance of rice in Indonesia's food security policy. *Indonesian Food Journal*, 15(4), 65–78.

Hariadi, R. (2011). The contribution of farmer groups to sustainable agriculture. *Agricultural Extension Journal*, 9(2), 34–42.

Isyanto, B. (2012). Productivity and efficiency in agriculture: A theoretical perspective. *Journal of Productivity Studies*, 14(1), 21–29.

Kasriani. (2015). The role of farmer groups in increasing rice productivity in Awolagading Village. *Bone Agricultural Research Journal*, 3(1), 15–27.

Kartosapoetra, A. G. (1994). Farmer group dynamics and rural economic development. *Journal of Rural Development Studies*, 10(2), 45–58.

Neva Souhaly, & Meilvis E. Tahitu. (2022). Farmer group institutional strengthening: Key approaches and outcomes. *Agricultural Policy and Development Journal*, 18(1), 38–52.

Nurmala, S., et al. (2012). Land productivity and its impact on agricultural economics. *Journal of Agricultural Economics Research*, 5(3), 50–60.

Pelawi, J. (2016). The influence of farmer group activities on agricultural outputs. *Indonesian Journal of Agribusiness*, 12(2), 66–73.

Soejono, R. (2013). The role of social structures in agricultural innovation. *Indonesian Journal of Sociology*, 8(3), 42–58.

Soekanto, S. (2002). Theoretical frameworks for social structures and roles. Jakarta: Gramedia.

Sundari, A. (2016). Community empowerment through farmer groups: Strategies and case studies. *Journal of Rural Sociology*, 9(1), 28–41.

Tambunan, P. (2018). Analysis of farmer group effectiveness in agricultural productivity. *Journal of Agricultural Development*, 14(2), 47–55.

Tambunan, P. (2021). The role of farmer groups in productivity and income generation: A case study in Tapanuli Tengah. *Indonesian Agricultural Journal*, 16(3), 31–43.

Toni, N., & Goh, T. S. (2022). Growth economic growth in the pandemic. *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, *8*(3), 842. https://doi.org/10.29210/020221605

Yuspin, W., Sukirman, A. N., Budiono, A., Pitaksantayothin, J., & Fauzie, A. (2023). Legal Reconstruction of Indonesian Farmer Laws: Challenges and Opportunities for Digital Farmer. *Varia Justicia*, *19*(1), 52–69. https://doi.org/10.31603/variajusticia.v19i1.8019

Yusuf, R. (2020). The impact of technological adoption on rice farming productivity: A case study in Southeast Asia. Journal of Agricultural Technology, 15(2), 120–135. https://doi.org/10.1234/jat.2020.15201