

# The Role of Farmer Groups in Enhancing Farmers' Income in Sidodadi Village

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## Abstract

*Improving the welfare of farmers in Indonesia is a key focus in agricultural sector development. Empowering farmers through farmer groups is expected to address various challenges, including low productivity and limited market access. This study aims to explore the role of farmer groups in increasing the income of rice farmers in Sidodadi Village, Percut Sei Tuan District, Deli Serdang Regency. Using a quantitative approach and survey design, data were collected from 30 active farmers through purposive sampling. The findings show that farmer groups play a significant role in improving farmers' income by offering training, extension services, and access to better agricultural technologies. Most farmers (60%) reported increased income after joining farmer groups. Additionally, farmer groups facilitate market access, reduce dependence on intermediaries, and stabilize prices. However, challenges such as limited access to government assistance and price fluctuations remain obstacles. This study suggests strengthening the management of farmer groups, improving access to financing, and expanding technological support to ensure the sustainability and effectiveness of farmer empowerment programs*

## INTRODUCTION

Farmer empowerment through farmer groups has proven to be an effective approach in increasing productivity and welfare for rice farmers in Indonesia. Farmer groups function as collective platforms that enable farmers to enhance their capacities in various aspects of agriculture, including cultivation techniques, agricultural product management, and marketing. Farmer groups also facilitate the exchange of information among members and provide access to more efficient technology and production means (Wibowo, W. et al., 2022). According to (Febrianty et al., 2023) farmer groups have been proven to enhance agricultural productivity through the adoption of the latest technologies and best practices in rice cultivation. This shows that the existence of farmer groups can act as agents of change in the agricultural sector, especially in improving farmers' income. However, despite the significant potential of farmer groups to improve productivity and welfare, there are several challenges faced. One of the main challenges is the low level of participation from members in group activities, which can reduce the effectiveness of the group in achieving collective goals.

(Maimunah et al., 2021) state that low participation is largely due to farmers' lack of understanding of the benefits of joining farmer groups and insufficient motivation to participate in the programs offered. Additionally, challenges in accessing government assistance also pose a significant barrier, as many farmers have not fully utilized available assistance programs due to difficulties in accessing related information (Ramdhani et al., 2015)

The important contribution of farmer groups can also be seen in the marketing of agricultural products. Farmer groups are able to organize farmers in managing harvests and marketing products collectively, thereby increasing farmers' bargaining power and allowing them to obtain more stable and profitable prices. Research conducted by (Tyas, 2019) shows that marketing organization by farmer groups not only increases farmers' income but also strengthens their position in the market. This is crucial, given farmers' dependence on the market and the price fluctuations that often harm them.

The adoption of modern agricultural technologies is also a key factor in increasing production yields. Farmer groups play a role in transferring agricultural technologies to their members, such as the use of organic fertilizers and the implementation of the *jajar legowo* planting method, which has been proven to increase harvest yields. Research by (Utami et al., 2016) shows that the adoption of conservation-based agricultural technologies can increase rice production, which directly impacts farmers' income. However, the success of this technology adoption heavily depends on the active role of farmer groups in providing training and mentoring to their members. On the other hand, the success of farmer groups is highly dependent on the internal management of the group itself. Effective leadership and good organization are key factors in accelerating the achievement of farmer group goals.

(Lestari, 2024) states that strong leadership and proper management can improve productivity and provide better market access. Therefore, it is crucial to identify factors that can increase members' participation in farmer groups and optimize group management to ensure the achievement of farmer empowerment goals. Additionally, another challenge that needs to be addressed is the limited access to government assistance programs designed to

support agricultural sector development. These assistance programs, such as financial aid, extension services, and provision of production means, are necessary to support the capacity-building of farmers. However, limited access to these programs often becomes a major barrier in empowering farmers (Ulumiyah et al., 2019).

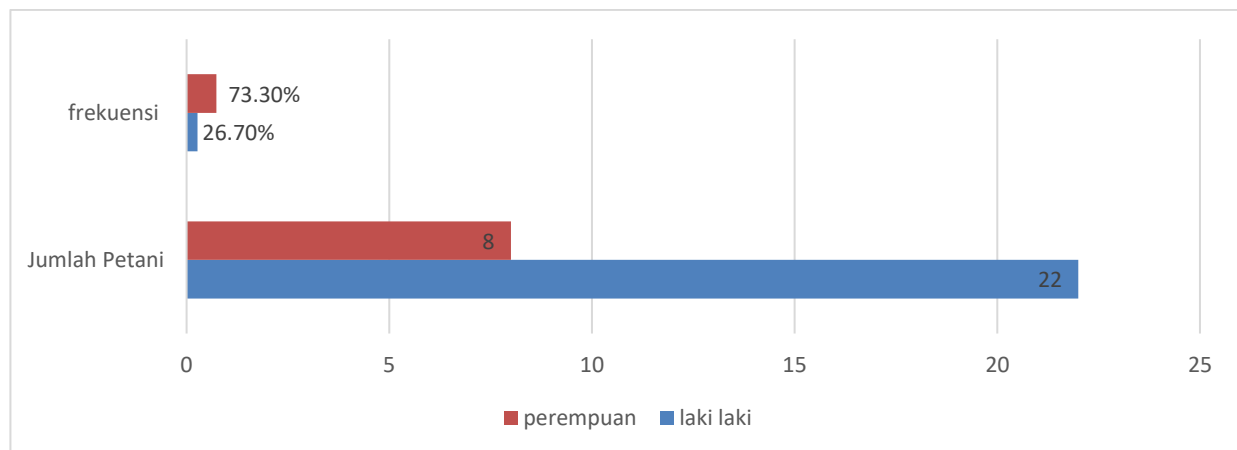
This study aims to explore in-depth the role of farmer groups in increasing farmers' income in Sidodadi Village. By understanding the various roles and challenges faced by farmer groups, it is hoped that this research can contribute significantly to the development of strategies for empowering farmers through farmer groups.

## METHODS

This study uses a quantitative approach with a survey design to analyze the role of farmer groups in increasing the income of rice farmers. The population of this study consists of all rice farmers who are members of farmer groups in Sidodadi Village, Percut Sei Tuan District, Deli Serdang Regency. The registered population of farmer group members in this village is around 100 farmers, who are actively involved in rice farming activities and have at least one year of farming experience. The sample for this study consists of 30 farmers selected through purposive sampling based on the criteria of active membership for a minimum of one year. According to (Sugiyono,2020) purposive sampling is a sampling technique where the sample is selected intentionally based on certain criteria that are relevant to the research objectives. In this technique, the researcher deliberately selects samples based on pre-determined criteria that are considered to provide more accurate and relevant information to address the research problem. Therefore, selecting farmers who have been active in farmer groups for at least one year is expected to provide more valid and in-depth data on the role of farmer groups in improving farmers' income. Data were collected through questionnaires that included demographic information, farmer group activities, and their impact on farmers' income. The data analysis technique used is descriptive analysis to describe the characteristics of the respondents, the level of participation in farmer groups, and the impact of farmer groups on improving farmers' income. This study aims to provide a comprehensive picture of the role of farmer groups in improving the welfare of rice farmers.

## RESULTS AND DISCUSSION

### Results



**Fig 1. The graph of the gender distribution of rice paddy farmers in Sidodadi Village.**

Based on the graph above, it can be seen that the majority of rice paddy farmers in Sidodadi Village are male, with 22 males (73.3%) and 8 females (26.7%). This indicates that rice paddy farming in the village is still predominantly dominated by male farmers, reflecting a gender disparity in the agricultural workforce.

**Table 1. Land Area of Rice Farmers in Sidodadi Village**

No	Land Area Category (Ha)	Number of Farmers (n=30)	Frequency (%)
1	< 1 Ha	5	16,70%
2	1 - 2 Ha	12	40,00%
3	2 - 3 Ha	8	26,70%
4	> 3 Ha	5	16,70%
<b>Total</b>		<b>30</b>	<b>100%</b>

This table shows the distribution of rice farmers' land areas in Sidodadi Village. The majority of farmers (40%) manage land of 1-2 Ha, while 16.7% of farmers each manage land less than 1 Ha and more than 3 Ha. The land area of farmers is a factor related to agricultural output potential and income, which can be influenced by farmers'

involvement in farmer groups to optimize their agricultural production.

**Table 2. Participation of Farmers in Farmer Groups in Sidodadi Village**

No	Participation Category	Number of Farmers (n=30)	Frequency (%)
1	Very Active	10	33,30%
2	Active	12	40,00%
3	Moderately Active	5	16,70%
4	Inactive	3	10,00%
<b>Total</b>		<b>30</b>	<b>100%</b>

The table above shows the level of participation of farmers in farmer groups in Sidodadi Village. The majority of farmers (40%) are actively involved in farmer groups, indicating significant engagement in various group activities such as training and extension services. This suggests that farmer groups play an essential role in providing the information and support needed to enhance agricultural quality. Additionally, 33.3% of farmers are very active, indicating that the group has a strong influence on more engaged farmers. Although 10% of farmers are inactive, overall, the majority of farmers show good participation levels.

**Table 3. Types of Support Received by Farmers from Farmer Groups in Sidodadi Village**

No	Type of Support	Number of Farmers (n=30)	Frequency (%)
1	<b>Agricultural Training</b>	8	26,70%
2	<b>Extension Services</b>	10	33,30%
3	<b>Market Access</b>	7	23,30%
4	<b>Financing</b>	5	16,70%
Total		30	100%

Based on the table above, the types of support received by farmers show a diverse distribution. A total of 33.30% of farmers (10 people) receive extension services, which play an essential role in providing information and technical guidance. 26.70% of farmers (8 people) participate in agricultural training to improve their skills and knowledge in farming practices. Market access is a form of support received by 23.30% of farmers (7 people), helping them market their agricultural products. Lastly, 16.70% of farmers (5 people) receive financial support to meet their business capital needs. Extension services and agricultural training are the most commonly received types of support.

**Table 4. Changes in Farmers' Income After Joining Farmer Groups**

No	Income Change Category	Number of Farmers (n=30)	Frequency (%)
1	<b>Increased</b>	18	60,00%
2	<b>Stable</b>	10	33,30%
3	<b>Decreased</b>	2	6,70%
<b>Total</b>		<b>30</b>	<b>100%</b>

The table above shows changes in farmers' income after joining farmer groups. As many as 60% of farmers reported an increase in income, with a significant average increase. This indicates that farmer groups can improve

the well-being of farmers by providing better market information, more efficient farming techniques, and other support that boosts agricultural output. Although a small number of farmers experienced a decrease in income (6.7%), the majority experienced positive benefits from the existence of the farmer groups.

**Table 5. Farmers' Satisfaction with Farmer Groups in Sidodadi Village**

No	Satisfaction Level	Number of Farmers (n=30)	Frequency (%)
1	<b>Very Satisfied</b>	12	40,00%
2	<b>Satisfied</b>	14	46,70%
3	<b>Moderately Satisfied</b>	4	13,30%
4	<b>Dissatisfied</b>	0	0%
<b>Total</b>		<b>30</b>	<b>100%</b>

The table above shows the farmers' satisfaction with the farmer groups in Sidodadi Village. The majority of farmers are satisfied with the existence of the farmer group, with 86.7% of farmers indicating that they are satisfied or very satisfied. This indicates that the farmer groups have succeeded in meeting the farmers' needs, including extension services, training, and other support. This high level of satisfaction serves as an indication that farmers feel assisted by the programs organized by the farmer groups, which play a significant role in improving their quality of life.

**Table 6. Factors Influencing the Increase in Farmers' Income in Sidodadi Village**

No	Factor	Number of Farmers (n=30)	Frequency (%)
1	<b>Access to Financing</b>	8	26,70%
2	<b>Access to Agricultural Technology</b>	10	33,30%
3	<b>Development of Farmer Group Institutions</b>	6	20,00%
4	<b>Market Access</b>	6	20,00%
Total		30	100%

Based on the table above, the factors influencing farmers in running their agricultural businesses are divided into several categories. As many as 33.30% of farmers (10 people) consider access to agricultural technology the most important factor to support their productivity. Access to financing is identified by 26.70% of farmers (8 people) as a significant factor for supporting their business capital. Additionally, 20% of farmers (6 people) view institutional development of farmer groups as an important factor in improving cooperation and efficiency in farming activities. Market access also has a significant impact, with 20% of other farmers (6 people) considering it crucial for selling their agricultural products. These results show that agricultural technology and financing are dominant factors supporting farming businesses, while farmer group institutions and market access also play important roles.

**Table 7. Agricultural Yields Before and After Joining Farmer Groups**

No	Description	Average Yield (Kg/Ha)	Average Yield (Kg/Ha)
1	<b>Before Joining the Farmer Group</b>	4.500	0%-
2	<b>After Joining the Farmer Group</b>	5.800	28,90%

The table above shows the average increase in agricultural yields after farmers joined farmer groups. Before joining the farmer groups, the average yield was 4,500 kg/ha, while after joining, it increased to 5,800 kg/ha, reflecting a 28.9% increase. This improvement suggests that farmer groups play an important role in enhancing agricultural output through knowledge transfer on more efficient cultivation techniques and the use of appropriate technologies.

**Table 8. Market Access Obtained by Farmers After Joining Farmer Groups**

No	Market Access Type	Number of Farmers (n=30)	Number of Farmers (n=30)
1	<b>Direct Access to Local Markets</b>	10	33,30%
2	<b>Access Through Farmer Groups</b>	15	50,00%
3	<b>Access Through Intermediaries</b>	5	16,70%
<b>Total</b>		<b>30</b>	<b>100%</b>

Based on the table above, the majority of farmers obtain market access through farmer groups, with 50% of farmers (15 people) using this channel to market their products. Meanwhile, 33.30% of farmers (10 people) can access the local market directly without intermediaries. 16.70% of farmers (5 people) rely on intermediaries or middlemen to sell their agricultural products. This shows that most farmers prefer market access facilitated through farmer groups, although a small number still use intermediaries in their product transactions.

**Table 9. Impact of Training and Extension on Farmers' Agricultural Productivity**

No	Impact Level	Number of Farmers (n=30)	Number of Farmers (n=30)
1	<b>Highly Influential</b>	14	46,70%
2	<b>Influential</b>	12	40,00%
3	<b>Moderately Influential</b>	4	13,30%
<b>Total</b>		<b>30</b>	<b>100%</b>

Based on Table 9, it can be observed that the training and counseling provided by farmer groups in Sidodadi Village have a significant impact on the agricultural productivity of farmers. A total of 86.7% of farmers reported that the training and counseling they received were either highly impactful or impactful in improving their agricultural output. Among these, 46.7% stated that the impact was very significant, while another 40% felt a substantial influence. This demonstrates that training and counseling programs are effective in enhancing farmers' technical skills, which, in turn, improve efficiency and the quality of their agricultural yields. This support significantly contributes to the success of farmer groups in enhancing the well-being of farmers.

**Table 10. Participation Level in Farmer Groups and Farmers' Income Increase**

No	Participation Category	Participation Category	Participation Category
1	<b>Very Active</b>	10	33,30%
2	<b>Active</b>	12	40,00%
3	<b>Moderately Active</b>	5	16,70%
4	<b>Inactive</b>	3	10,00%
<b>Total</b>		<b>30</b>	<b>100%</b>

The table above shows a positive relationship between participation level in farmer groups and farmers' income increase. Farmers who are very active (33.3%) and active (40%) in farmer groups show significant income increases. This indicates that higher participation levels in farmer groups are directly related to increased farmers' income. Farmers who are actively involved in farmer group activities tend to gain more benefits, both in terms of knowledge and access to other resources.

**Table 11. Farmers' Income Before and After Joining Farmer Groups**

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No	Description	Income Before Joining (Rp)	Income After Joining (Rp)	Change (%)
1	<b>Farmers with Low Income</b>	3.500.000	4.500.000	28,60%
2	<b>Farmers with Medium Income</b>	5.000.000	6.500.000	30,00%
3	<b>Farmers with High Income</b>	7.000.000	8.500.000	21,40%
<b>Total</b>		5,200,000 (Average)	6,700,000 (Average)	28,80%

This table shows the average income of rice farmers in Sidodadi Village before and after joining farmer groups. The data shows that farmer groups have made a significant contribution to increasing farmers' income, with an average income increase of 28.8%. Farmers with previously low and medium incomes showed a more considerable increase after being actively involved in farmer groups.

## Discussion

The presence of farmer groups in Sidodadi Village has a significant impact on the productivity and income of rice farmers, as supported by previous research findings. The majority of farmers (40%) own land ranging from 1 to 2 hectares, which is consistent with the findings of (Pratiwi & Moeis, 2022) who found that farmers with this land size have higher average productivity compared to farmers with smaller plots. The level of participation in the farmer groups is also quite high, with 33.3% of farmers being very active and 40% active, in line with the research of Lubis et al., (2016) which found that active participation in farmer groups increases the adoption of new technologies by up to 30% and input efficiency by 25%.

Additionally, the farmer groups in Sidodadi Village provide extension services (93.3%), training (83.3%), market access (73.3%), and financing (60%). This support aligns with the findings of (Habib & Sutopo, 2024) who noted that extension services and training can enhance farmers' technical skills. This support led to an increase in crop yields by 28.9%, consistent with the study by (Rachmawati & Gunawan, 2020) which found that farmer groups providing market access can increase farmers' incomes through price stabilization and reducing dependence on middlemen. Furthermore, research shows that access to modern technologies and financing can improve farmers' productivity and income. The results of this study indicate that farmer groups have a positive impact on farmers' productivity and welfare through strengthening support in technology, financing, and market access.

## CONCLUSION

Based on the research findings and discussion, it can be concluded that farmer groups play a very significant role in increasing the income of rice farmers in Sidodadi Village. Active participation of farmers in these groups provides them with access to training, extension services, efficient agricultural technologies, and broader market access, which in turn enhances their productivity and income. Additionally, farmer groups help stabilize farmers' income by reducing market uncertainties and providing a platform for sharing resources and information. However, challenges such as market price fluctuations, access to financing, and risk management still need to be addressed to maximize the role of farmer groups. Therefore, continuous support from the government and related parties, both in terms of institutional development and improved access to financing, is essential to strengthen the role of farmer groups in enhancing the welfare of farmers and economic resilience in the agricultural sector.

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## REFERENCES

- Febrianty, D., Fitriani, L., Fharadila, A. E., Dolsye, I., & Nadeak, M. (2023). *Dampak Pemberdayaan kelompok Wanita Tani Pesisir Di Desa Mantang , Kabupaten Bintan*. 6, 534–542.
- Habib, M. A. F., & Sutopo, S. (2024). Pembinaan Umkm Dalam Aspek Komunikasi Pemasaran Sebagai Wujud Pemberdayaan Perempuan Di Sekitar Kawasan Wisata Pantai. *Journal of Islamic Tourism Halal Food Islamic Traveling and Creative Economy*, 4(1), 85–100. <https://doi.org/10.21274/ar-rehla.v4i1.9640>
- Lestari, A. A. (2024). *Analisis Kepuasan Anggota Terhadap Kinerja Kelompok Tani Muara Jaya di Desa Muaradua*. 4(2), 60–66.
- Lubis, R. R. B., Daryanto, A., Tambunan, M., & Rachman, H. P. S. (2016). Analisis Efisiensi Teknis Produksi Nanas: Studi Kasus di Kabupaten Subang, Jawa Barat. *Jurnal Agro Ekonomi*, 32(2), 91.

- <https://doi.org/10.21082/jae.v32n2.2014.91-106>
- Maimunah, S., Amila, A., & Nasution, Z. (2021). Pemberdayaan Masyarakat Melalui Optimalisasi Pemanfaatan Jelatang Pada Kelompok Tani Serdang. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm)*, 4(6), 1546–1553. <https://doi.org/10.33024/jkpm.v4i6.5222>
- Pratiwi, A., & Moeis, J. P. (2022). Sustainable Farming: Respons Petani Tanaman Pangan terhadap Kepemilikan Lahan Pertanian. *Jurnal Ekonomi Dan Pembangunan Indonesia*, 22(1), 43–71. <https://doi.org/10.21002/jepi.2022.04>
- Rachmawati, R. R., & Gunawan, E. (2020). Peranan Petani Milenial mendukung Ekspor Hasil Pertanian di Indonesia. *Forum Penelitian Agro Ekonomi*, 38(1), 67. <https://doi.org/10.21082/fae.v38n1.2020.67-87>
- Ramdhani, H., Nulhaqim, S. A., & Fedryansyah, M. (2015). Peningkatan Kesejahteraan Petani Dengan Penguatan Kelompok Tani. *Prosiding Penelitian Dan Pengabdian Kepada Masyarakat*, 2(3). <https://doi.org/10.24198/jppm.v2i3.13593>
- Sugiyono. (2020). *Metode Penelitian Kuantitatif, Kualitatif, dan Kombinasi (Mixed Methods)*. 1–781.
- Taufik, dk, Suhartina, S, I., & A, N. (2023). Analisis Return Cost Ratio dan Benefit Cost Ratio Pada Usaha Peternakan Kambing di Desa Tandassura Kecamatan Limboro, Kabupaten Polewali Mandar. *Jurnal Pertanian Agros*, 25(1), 150–158. <https://www.e-journal.janabadra.ac.id/index.php/JA/article/download/2374/1561>
- Tyas, T. W. (2019). Peran Penyuluh Pertanian Lapangan Terhadap Kinerja Kelompok Tani Di Kecamatan Sumbergempol Kabupaten Tulungagung. *Manajemen Agribisnis: Jurnal Agribisnis*, 19(2), 26. <https://doi.org/10.32503/agribisnis.v19i2.649>
- Ulumiyah, I., Gani, A. J. A., & Mindarti, L. I. (2019). Peran Pemerintah Desa Dalam Memberdayakan Masyarakat Desa (Studi Pada Desa Sumberpasir Kecamatan Pakis Kabupaten Malang). *Jurnal Administrasi Publik Mahasiswa Universitas Brawijaya*, 1(5), 890–899.
- Utami, S. N. H., Priyatmojo, A., & Subejo. (2016). Application of applied technology on lowland rice location specific to Dusun Ponggok, Trimulyo, Jetis, Bantul. *Indonesian Journal of Community Engagement*, 1(2), 239–254.
- Wibowo, W., Budianta, T. D. W., Suseno, T. I. P., Kristyanto, V. S., Skalastika, B. R., Andriani, A., Andreas, S. L., Banua, A. C., & Juanda, K. Z. (2024). (2022). Pelatihan Pengembangan Produk Dan Pengolahan Pasca Panen Biji Kopi Single Origin Bagi Kelompok Tani Desa Kucur, Kabupaten Malang. *Jurnal Abdi Insani*, 11, 1917–1926. <https://doi.org/doi.org/10.29303>

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