

Community Empowerment through Rang Mudo Farmers Group: Efforts to Improve the Economy in Nagari Paninjauan

Mulyani, Irwandi*

Universitas Islam Negeri Mahmud Yunus Batusangkar, Indonesia

*Correspondence: mulyani4057@gmail.com

Abstract. The community service program through the Rang Mudo Farmers Group in Nagari Paninjauan aims to improve farmers' economic well-being through community-based empowerment. The method employed is a participatory approach involving the government, private institutions, and the local community in various stages, including needs assessment, training, and program implementation. This service focuses on enhancing farmers' technical capacities, strengthening social networks, and expanding market access. The results indicate that farmers have increased productivity and income through the adoption of modern agricultural technologies, the use of subsidized fertilizers, and marketing collaboration. The program also successfully built solidarity among group members, created new job opportunities, and improved the competitiveness of agricultural products in regional markets. In conclusion, this community service not only boosted farmers' economic well-being but also strengthened social capital that supports the sustainability of farming communities in Nagari Paninjauan.

Keywords: community empowerment; farmers' group; sustainable agriculture; subsidized fertilizer; economic improvement

1. Introduction

Indonesia is an agrarian country that relies heavily on the agricultural sector as one of the main pillars of its economy. Despite the sector's significant role in the national economy, economic disparities in rural areas, especially for small farmers, remain a major challenge (Hermanto, 2011). Farmers' incomes are often constrained by issues such as limited market access, minimal capital, and reliance on traditional farming practices. In this context, farmers' groups have emerged as a solution to improve the economic well-being of farmers through collaborative and community-based empowerment approaches (Ika Marlina 2023). These groups enable farmers to access resources, knowledge, and markets more effectively, while also fostering social solidarity among their members (Rahmawati, 2019).

The Rang Mudo Farmers Group in Nagari Paninjauan, X Koto District, Tanah Datar Regency, is a concrete example of local-level farmer empowerment. The group was formed to address the pressing needs of farmers, most of whom still rely on

traditional farming methods. Limited access to modern agricultural technology, technical training, and broader markets were the primary reasons for establishing this group. In the agricultural context of Nagari Paninjauan, farmers' groups play a strategic role in driving local economic growth, focusing on improving agricultural yields and farmers' quality of life.

The Rang Mudo Farmers Group serves not only as a platform for farmers to exchange experiences and knowledge, but also as a collective strength to overcome various agricultural challenges. Through extension activities, training, and cooperation with the government and non-governmental organizations, the group has worked to enhance farmers' capacity to manage their land more effectively. One of the biggest challenges faced by farmers in this area is weather fluctuations and market price instability, which directly affect their incomes. Therefore, empowerment focusing on strengthening farmers' capacities is increasingly important to ensure their economic sustainability (Afriansyah, 2020).

In the framework of community service, the activities carried out by the Rang Mudo Farmers Group can be categorized as systematic efforts to empower rural communities by increasing capacities and skills in agriculture. This group not only provides access to agricultural training and technology but also offers social and economic support to its members. For example, the group has successfully collaborated with agricultural extension officers to provide technical guidance on the use of fertilizers, irrigation techniques, and pest control, all of which have contributed to improving crop yields. Furthermore, the group has developed wider marketing networks, allowing farmers to sell their products at more competitive prices (Abdul, 2020).

Various studies and community service programs have highlighted the important role of farmers' groups in empowering rural farmers. In the literature on farmer empowerment, there is a consensus that farmers' groups can increase farmers' incomes through sustained collaboration and extension activities. For instance, Rahmawati's (2019) research demonstrated that farmers' groups in West Lampung successfully increased farmers' incomes through training programs and access to capital. The program introduced more efficient modern farming methods, which significantly improved crop yields and farmers' incomes.

Additionally, Saragih's (2006) study on agricultural and rural policies in Indonesia emphasized the importance of infrastructure development and access to capital as key factors in increasing farmers' productivity. Community service programs involving farmers' groups are often focused on improving access to technology and markets, as well as strengthening the institutional capacity of farmers' groups. Abdul-Rahman & Abdulai (2020) in their study in Ghana also showed that collective action within farmers' groups can improve market access for small farmers, ultimately contributing to increased income and economic well-being.

However, previous community service programs have generally focused on enhancing technical capacities and market access, without paying sufficient attention to the social aspects, such as community solidarity and social networks built among group members. In this context, the study of the Rang Mudo Farmers Group in Nagari Paninjauan adds a new dimension to empowerment by emphasizing social cohesion alongside technical improvements. In addition to enhancing technical skills, this group prioritizes strengthening social bonds and trust among its members, which serves as crucial social capital in supporting the group's long-term economic sustainability.

One gap in previous studies is the lack of attention to the role of social capital in the success of farmer empowerment programs. Most previous efforts have emphasized the introduction of new technology and market access, without considering the importance of strong social networks among group members. As Lawang (2015) noted, social networks and trust among community members can be key factors in the success of community empowerment programs.

The novelty of the empowerment program through the Rang Mudo Farmers Group lies in its holistic approach, which not only emphasizes the technical aspects of agriculture but also focuses on social and community dimensions. The program combines technical training with efforts to build strong social solidarity among its members. By leveraging the social capital that exists in Nagari Paninjauan, the program creates a supportive environment where farmers receive not only technical knowledge but also moral and social support from their community. This gap is filled by the community service program through the Rang Mudo Farmers Group, which adopts a more comprehensive, community-based approach.

This empowerment program is also different from previous programs due to its focus on an area with unique geographical and social conditions, such as Nagari Paninjauan, which has agricultural potential but faces challenges like weather fluctuations and limited market access. By paying special attention to social capital, the program aims to create a more sustainable model of empowerment that not only improves farmers' economic conditions but also strengthens social cohesion in the community.

Nagari Paninjauan faces several challenges that hinder the development of its agricultural sector. The main problems include limited access to modern agricultural technology, low capacity among farmers to adopt new techniques, and restricted market access, which prevents agricultural products from being sold at competitive prices. In addition, farmers in Nagari Paninjauan also face environmental challenges, such as unpredictable weather patterns and insufficient infrastructure, particularly irrigation systems.

Another significant issue is the weak social solidarity among farmers. Although farmers' groups have been formed, trust among members still needs to be strengthened to create better synergy in overcoming these challenges. The lack of social capital has prevented the farmers' group from functioning optimally, both in terms of internal

cooperation and in negotiations with external parties, such as markets and financial institutions.

The empowerment program through the Rang Mudo Farmers Group aims to empower farmers in Nagari Paninjauan by enhancing their technical skills, strengthening social networks, and expanding market access. The expected outcomes of this program include increased farmer incomes, improved technical skills in land management, and stronger solidarity and trust among farmers' group members.

Moreover, this program is expected to create a sustainable model of empowerment that can be replicated in other areas with similar conditions. By strengthening social capital, the program focuses not only on economic aspects but also on social factors that support the long-term sustainability of the program.

2. Methodology

This community service was carried out using a participatory approach that directly involved the farmers who are members of the Rang Mudo Farmers Group in Nagari Paninjauan, X Koto District, Tanah Datar Regency. The method employed was a collaborative approach between the local community, the local government, and the community service team from academic institutions. The implementation of this community service was divided into several main stages: community needs identification, participatory planning, program implementation, and monitoring and evaluation (Ardial, 2014). The entire process was based on active participation from the farmers and the local community, ensuring that they were not merely service recipients but also agents of change actively involved in the program's success.

The first stage involved community needs identification through surveys and in-depth interviews with members of the farmers' group and other relevant stakeholders in Nagari Paninjauan. The community service team conducted field observations to understand the challenges faced by farmers, such as limited access to technology, skills, and markets. Semi-structured interviews with farmers were conducted to delve deeper into the specific issues they face in their daily farming practices. Subsequently, a needs analysis was carried out to determine the priority programs best suited to the local situation (Bungin, 2007). Based on the observations and interviews, it was found that training on the use of agricultural technology, strengthening group management capacity, and expanding market networks were the most urgent needs for farmers in Nagari Paninjauan.

After the needs identification was completed, the second stage involved participatory planning, where the farmers were actively involved in designing the activities to be implemented. Farmers' group meetings were held to discuss the program plans, including technical training, agricultural extension services, and the development of market networks. Farmers' group members, the village government, and the community service team collaborated to develop an activity schedule that aligned with the farmers' availability. The planned programs included training in modern farming

techniques, efficient land management, and farm business management to increase the added value of their agricultural products. Moreover, cooperation with agricultural extension officers from the relevant government departments was facilitated to provide direct technical assistance to the farmers. Each training session was designed with a participatory approach, allowing farmers to directly practice the material presented, making it easier for them to apply the knowledge in their daily lives.

The third stage was the implementation of the program, which took place over several months through a direct field approach. Each member of the farmers' group was given the opportunity to participate in training and mentoring tailored to their needs. The training covered environmentally friendly crop cultivation techniques, the use of organic fertilizers, and marketing strategies for agricultural products. Additionally, training on farm financial management was provided to help farmers better manage their income. During this process, the community service team also provided technical assistance in the form of more efficient farming tools, such as grass cutters and rice threshers, aimed at increasing the farmers' productivity. After the program implementation, monitoring and evaluation were carried out regularly to assess the program's success in enhancing farmers' capacities and incomes. Monitoring involved collecting post-training data, both through interviews and surveys, to gauge the program's direct impact. This evaluation was then used to refine and adjust the program for future implementation, ensuring the sustainability of this empowerment initiative.

Through this collaborative and participatory approach, the service method aimed to empower farmers not only in agricultural techniques but also in managerial and social aspects. This approach is expected to create a more self-sufficient and competitive farmers' group, capable of overcoming the challenges faced in the agricultural sector. Additionally, the program aims to build strong social capital among the farmers, so they can support each other economically and socially, ultimately enhancing their overall well-being.

3. Results and Discussion

3.1. Community Service Results

The community service program carried out by the Rang Mudo Farmers Group in Nagari Paninjauan, X Koto District, Tanah Datar Regency, has positively impacted the local economy. One of the main strategies implemented is empowerment through the farmers' group, allowing members to share knowledge and resources. This approach not only improves productivity but also enhances efficiency in the agricultural production process. As a result of this community service, farmers have been able to strengthen their bargaining position in the market and gain better access to technology, financing, and marketing networks. These efforts have also contributed to increased employment opportunities and income for the rural community.

3.1.1. Extension Activities

Extension activities are a key component of the community service program implemented by the Rang Mudo Farmers Group. The main objective is to improve farmers' knowledge and skills in various agricultural aspects, including technology use, land management, and product marketing strategies. These activities cover topics relevant to the needs of farmers in Nagari Paninjauan, such as the use of organic fertilizers, environmentally friendly pest control, and more efficient irrigation techniques (Robert, 2015). The extension activities are supported by collaborations with the government, non-governmental organizations (NGOs), and academic institutions, which provide technical guidance and educational materials to the farmers.

The focus on organic fertilizers and environmentally friendly pest control has proven particularly beneficial, especially in the context of sustainable agriculture. The use of organic fertilizers not only reduces dependency on expensive chemical fertilizers but also improves soil health and enhances the quality of crops naturally. Additionally, environmentally friendly pest control, such as using natural predators and integrated pest management, helps reduce the use of chemical pesticides that are often harmful to human health and the environment. The result of these activities is improved agricultural productivity and reduced production costs, as farmers no longer need to spend significant amounts on expensive chemical fertilizers and pesticides.

Beyond technical aspects, the extension activities also teach farmers more effective marketing strategies. One of the challenges faced by farmers in Nagari Paninjauan is limited access to broader markets. Through these extension activities, farmers learn how to increase the value of their agricultural products through simple processing before selling, as well as digital marketing strategies that are gradually being introduced. Farmers are taught how to use social media and other digital platforms to market their products beyond their local area, thus expanding their market reach and enhancing the competitiveness of their products.

Through these extension activities, members of the farmers' group gain direct access to the latest agricultural information and technologies that were previously difficult to obtain. The results show that farmers can apply more effective methods in crop cultivation, ultimately increasing their harvest yields. One example of the success of these activities is the improvement in crop quality through the use of organic fertilizers, which not only are more environmentally friendly but also enhance long-term soil fertility. Additionally, the implementation of more efficient irrigation techniques helps farmers conserve water, particularly during the dry season, ensuring that crops continue to thrive even in less favorable weather conditions.

The extension activities are not limited to technical agricultural aspects. The Rang Mudo Farmers Group also conducts health and environmental awareness programs aimed at raising farmers' awareness of the importance of personal health and environmental preservation. Health extension activities include education on maintaining environmental cleanliness and sanitation, as well as preventing infectious

diseases that are common in rural areas. This health education is crucial, as many farmers work in conditions that may not always support their well-being. Through this education, it is expected that farmers will become more aware of the potential health risks that could affect their productivity.

In addition, environmental awareness activities educate farmers on the importance of preserving natural resources. This includes efforts to prevent soil erosion, manage agricultural waste in environmentally friendly ways, and use natural resources wisely. With better knowledge about health and the environment, farmers can adopt more sustainable farming practices that focus on long-term well-being. Proper agricultural waste management, for example, can prevent groundwater and river pollution caused by excessive chemical use on farmlands. This not only has positive environmental impacts but also supports the long-term productivity of agricultural land for future generations.

Moreover, the extension activities have encouraged innovation among farmers, improving their work efficiency in the field. Farmers are encouraged to share best practices discovered during their farming activities, such as how to manage land more efficiently or find simple solutions to common problems. Such collaboration strengthens the social bonds among group members, making it easier for them to work together in addressing agricultural challenges like weather changes or market price fluctuations.

The extension activities conducted by the Rang Mudo Farmers Group not only focus on enhancing farmers' technical skills but also aim to build the social capacity of the community. These activities have long-term impacts by fostering more knowledgeable, independent, and competitive farmers in the marketplace. With the collaboration between farmers' groups, the government, and academic institutions, it is hoped that these extension activities will continue to grow and be replicated in other regions with similar conditions. These activities also open opportunities for farmers to innovate and create farming practices that not only benefit them economically but also promote environmental sustainability and social well-being.

3.1.2. Creativity in Agricultural Management

One of the innovations developed by the Rang Mudo Farmers Group is the use of a rice blower machine, which has proven highly beneficial for its members. This tool is designed to expedite the rice cleaning process and reduce labor needs in post-harvest operations. Prior to this innovation, rice processing was done manually, requiring considerable time and labor. Many farmers faced high labor costs and the lengthy time needed to clean rice manually. With the introduction of the rice blower machine, farmers have significantly reduced their working time, saved labor costs, and minimized grain loss during the cleaning process. This tool has transformed the way farmers work, making them more efficient and increasing the yield from their harvests.

The efficiency gained from using the rice blower machine not only reduces physical labor but also boosts productivity. Farmers can complete rice cleaning faster, allowing them to process larger volumes of harvested rice in a shorter amount of time

(Markelova, 2009). This is crucial for small and medium-scale farming operations, where effective use of time and labor can directly contribute to income growth. Moreover, reducing the amount of grain lost during the cleaning process increases the total volume of rice that can be sold. In this regard, the rice blower machine enhances efficiency while ensuring that the quality of the harvested rice is maintained.

The success of the rice blower machine also impacts the market. Cleaner and more quickly processed rice offers farmers the advantage of selling their products at higher prices. Markets tend to value well-processed products, particularly in terms of cleanliness and the quality of the grains. This economic incentive encourages farmers to continue adopting this technology. As a result, several other farmers in the region have begun following the Rang Mudo Farmers Group's example by using the rice blower machine. This innovation has spread to neighboring communities, demonstrating that creativity in the agricultural sector can trigger wider changes without reliance on expensive or inaccessible technology.

The use of the rice blower machine serves as an excellent example of how simple innovations can have a profound impact on efficiency and agricultural output. Innovation does not always require advanced technology or substantial investment in modern equipment. In many cases, practical solutions tailored to local needs can yield equally effective results. The rice blower machine, although simple in its design, has proven that appropriate technology can help farmers overcome daily challenges and improve their market competitiveness.

In addition to the rice blower machine, the Rang Mudo Farmers Group continues to promote innovation in other farming practices, such as the use of crop rotation methods that help reduce the risk of crop failure due to changing weather conditions. Climate change and unpredictable weather have posed significant challenges for farmers in rural areas. By implementing crop rotation, farmers can be more flexible in managing planting schedules and selecting crop types that are suitable for prevailing weather conditions. This not only reduces the risk of crop failure but also allows for more diverse crop rotation, keeping the soil fertile and preventing depletion.

Innovation in crop rotation methods is supported by regular extension programs and training provided by the Rang Mudo Farmers Group. These training sessions equip farmers with sufficient knowledge of modern farming techniques that are both efficient and environmentally friendly. One of the methods taught is the use of water-efficient irrigation systems, which is crucial for farmers operating in areas with limited water resources. Improved water management, particularly through drip irrigation or micro-irrigation systems, helps farmers maximize water usage and ensure that crops receive adequate water, even during dry seasons.

In addition to crop rotation and water management, another innovation encouraged by the Rang Mudo Farmers Group is the use of environmentally friendly organic fertilizers. By reducing the use of chemical fertilizers and switching to organic ones, farmers can maintain long-term soil fertility while minimizing negative

environmental impacts. Organic fertilizers made from agricultural waste are also cheaper and more readily available, helping to lower production costs. This aligns with the principles of sustainable agriculture, where farmers are taught to utilize available resources in ways that do not harm the environment.

These innovations not only bring about positive changes in terms of efficiency and productivity but also have significant social impacts. Farmers who are part of the Rang Mudo Farmers Group feel more confident in facing agricultural challenges, particularly when dealing with market uncertainty and changing weather conditions. With the support of innovations promoted by the farmers' group, they feel more capable of overcoming these challenges and improving their overall well-being. This demonstrates that with the right creativity and support, farmers can continue to grow and adapt to changes, both economically and environmentally.

Overall, the innovations driven by the Rang Mudo Farmers Group, from the use of the rice blower machine to crop rotation methods, show that creativity in agricultural management can have a highly positive impact. These innovations not only improve work efficiency but also strengthen farmers' competitiveness in the market, increase their income, and bring positive environmental benefits.

3.1.3. Collaboration with the Government

The collaboration between the Rang Mudo Farmers Group and the government has been a key factor in the success of this community service program. Working with various relevant agencies, especially the Department of Agriculture, has enabled the farmers' group to access a variety of support designed to enhance productivity and farmers' well-being. One of the most significant forms of support is fertilizer subsidies, which play a crucial role in reducing agricultural production costs. Through the Family Card (KK) system, members of the farmers' group can purchase fertilizers at more affordable prices, easing their financial burden and allowing them to allocate resources toward other aspects, such as improving agricultural infrastructure or purchasing superior seeds.

These fertilizer subsidies are particularly vital for farmers working with limited capital. The high cost of chemical fertilizers is often one of the biggest barriers for small-scale farmers. With the subsidies, farmers in the Rang Mudo Farmers Group can not only reduce production costs but also increase their crop yields. As a result of this collaboration, farmers' incomes have improved, leading to a better standard of living. Additionally, the availability of sufficient fertilizers allows farmers to maintain both the quality and quantity of their harvests year after year, making their farming practices more stable and sustainable (Mubaroq dan Humairotul, 2022).

Besides fertilizer subsidies, technical assistance provided by agricultural extension officers is another crucial element of this partnership. These officers, appointed by the Department of Agriculture, play an active role in offering technical guidance to farmers. Their guidance includes the use of appropriate technologies, more efficient land management, and more effective techniques for pest and disease control.

The extension officers not only provide advice but also engage in intensive field mentoring, ensuring that farmers fully understand and can apply the knowledge shared with them.

The role of extension officers is essential in addressing various challenges that arise in the farming process. For example, when crops are attacked by pests or diseases, the officers provide quick and accurate solutions based on their knowledge of local conditions. This technical guidance gives farmers greater confidence, as they feel supported by experts who can help them tackle issues that may be beyond their individual expertise. In the long term, the presence of extension officers helps farmers enhance their skills, making them more self-sufficient in managing their agricultural enterprises.

This collaboration also allows the Rang Mudo Farmers Group to access government-backed financing programs, opening up wider opportunities for farmers to expand their agricultural businesses. Access to financing offers a solution for farmers needing additional capital to expand their land or purchase more modern farming tools. For example, with the help of such financing, farmers can buy small tractors or grass-cutting machines, which help speed up land preparation and increase work efficiency. With additional capital, farmers can also improve their agricultural infrastructure, such as building better irrigation systems, which ultimately boosts their land's productivity.

Access to financing is also crucial for improving farmers' competitiveness in the market. Farmers with greater access to capital can invest in technology that enhances the quality of their products. Better-quality agricultural products, for instance, can be sold at higher prices in both local and regional markets. In some cases, farmers can even begin to reach broader markets outside their region, thanks to the improved quality and quantity of the products they produce. This creates significant economic benefits for farmers while also increasing the competitiveness of agricultural products from Nagari Paninjauan.

Furthermore, government collaboration extends beyond subsidies and financing to include product marketing facilitation. The Department of Agriculture assists farmers by connecting them with broader market networks. Through this initiative, farmers are no longer solely dependent on local markets, which can sometimes be limited, but are able to market their products at regional and even national levels. This is particularly important in addressing price fluctuations, which often disadvantage farmers. With access to larger markets, farmers have more options when it comes to setting the selling price of their products, ultimately improving their well-being.

The impact of this collaboration has been substantial. With government support, the Rang Mudo Farmers Group has been able to scale up their farming operations. Where farmers previously focused only on small-scale production to meet local market demands, with subsidies, technical assistance, and access to financing, they are now able to expand their farming businesses and increase overall production. This has also affected the competitiveness of agricultural products from the region in wider markets.

For example, agricultural products from Nagari Paninjauan are now not only sold in Tanah Datar but are also beginning to penetrate markets in other districts.

Collaboration with the government also fosters a synergistic relationship between farmers and relevant agencies. Government programs designed to support the agricultural sector become more effective because of well-organized farmers' groups like the Rang Mudo Farmers Group. The government finds it easier to distribute assistance or training programs because the farmers' group has established a strong system to coordinate its members. This also encourages further government involvement in supporting innovations that may be undertaken by the farmers' group, such as developing processed products or diversifying farming ventures.

With a strong partnership between the Rang Mudo Farmers Group and the government, the future of agriculture in Nagari Paninjauan looks brighter. This collaboration provides not only short-term solutions to issues like high fertilizer costs or limited market access but also lays a strong foundation for the sustainable development of agriculture in the future.

3.2. Discussion

The results of this community service demonstrate that the collaborative approach involving the government, the community, and other supporting institutions successfully enhanced the capacity and productivity of the farmers. Moreover, this initiative also managed to build strong solidarity and social networks among the members of the Rang Mudo Farmers Group, which in turn strengthened their bargaining power in the market and improved their economic well-being.

3.2.1. Improving Quality of Life through Access to Subsidized Fertilizers

One of the most tangible outcomes of the program conducted by the Rang Mudo Farmers Group is the improvement in the quality of life of its members through access to subsidized fertilizers. Fertilizer subsidies have become an essential tool in reducing agricultural production costs in Nagari Paninjauan, which significantly contributes to increasing farmers' incomes. Through collaboration with the government, the farmers' group successfully obtained fertilizers at much more affordable prices, easing the financial burden typically faced by small farmers. With lower production costs, the profit margins from their harvests increased, which ultimately had a positive impact on household welfare, including meeting basic needs and improving the overall standard of living.

The use of subsidized fertilizers also plays an important role in maintaining soil and crop quality. One of the major challenges farmers face is soil degradation due to excessive use of chemical fertilizers without proper guidance. However, through extension programs that accompany the fertilizer subsidies, farmers are taught how to use fertilizers efficiently and according to the needs of their crops. As a result, the soil remains fertile, and crop productivity increases both in terms of quantity and quality. Thus, farmers not only achieve higher yields but also produce better-quality crops, which in turn enhances their market competitiveness.

Furthermore, the provision of subsidized fertilizers through the farmers' group fosters solidarity and cooperation among its members. In this system, members who may not have direct access to subsidized fertilizers can obtain them through the farmers' group, which acts as an intermediary between the farmers and the government. This system greatly benefits small farmers who may struggle to access subsidies individually, either due to administrative barriers or limited information. The solidarity built through this mechanism strengthens social ties among group members, creating a culture of mutual help and support in overcoming daily farming challenges.

Moreover, the impact of the fertilizer subsidy program is not only felt by members of the farmers' group but also by the surrounding community who are not part of the group. The Rang Mudo Farmers Group serves as a bridge between non-member farmers and the resources provided by the government. In some cases, the farmers' group gradually assists the surrounding community to register as members or beneficiaries of the subsidies. This expands the program's impact, creating a domino effect where more and more farmers benefit from the fertilizer subsidies. In the long term, the success of the subsidy program contributes to better food security at the community level, as more farmers can produce higher-quality agricultural outputs.

The success of the Rang Mudo Farmers Group in utilizing fertilizer subsidies also highlights the importance of social capital in the success of farmer empowerment programs. The solidarity built among the group members ensures that the distribution of subsidized fertilizers runs smoothly and efficiently. Additionally, with the group system in place, farmers can share information on the best ways to utilize the subsidized fertilizers to improve their agricultural outcomes. This helps reduce farmers' reliance on expensive chemical fertilizers, which often harm the soil. Therefore, the use of subsidized fertilizers not only lowers production costs but also fosters more sustainable and environmentally friendly farming practices.

The fertilizer subsidy program also addresses one of the main issues often faced by farmers in rural areas: limited access to affordable and high-quality agricultural inputs. Before the subsidy program, many farmers in Nagari Paninjauan had to purchase fertilizers at high market prices, significantly reducing their profits. With the availability of subsidized fertilizers, farmers can use the remaining income for other investments that can improve productivity, such as purchasing superior seeds, farming equipment, or expanding their land. Thus, the subsidies provide not only short-term benefits but also long-term assistance, creating conditions that enable farmers to continue growing and developing.

In addition to economic benefits, the program also provides significant social advantages. The solidarity formed among the members of the farmers' group not only creates internal support but also strengthens their bargaining position when negotiating with external parties, such as fertilizer suppliers or buyers of their agricultural products. As an organized group, the Rang Mudo Farmers Group has greater leverage to secure better fertilizer prices and sell their crops at more competitive rates. This improves the

farmers' economic standing in the market, reducing their dependence on middlemen or traders who often exploit them with unfair prices.

The fertilizer subsidy program also provides environmental benefits. Accompanied by extension programs, farmers are taught how to use fertilizers wisely and in quantities appropriate to the needs of their crops. Efficient fertilizer use helps reduce the risk of environmental pollution caused by excessive use of chemical fertilizers, which can contaminate groundwater and damage local ecosystems. Farmers involved in the program are also educated on the importance of maintaining soil health to ensure long-term productivity, which is one of the fundamental principles of sustainable agriculture.

Overall, access to subsidized fertilizers through the Rang Mudo Farmers Group has had a highly positive impact on farmers in Nagari Paninjauan, both economically, socially, and environmentally. The program not only helps increase farmers' incomes by lowering production costs but also fosters solidarity among group members, strengthening social and economic networks within the community. In the long term, the fertilizer subsidy program helps create better conditions for the development of sustainable agriculture, with support from the government and collaboration among farmers. Consequently, the program not only provides immediate benefits to the farmers but also lays a strong foundation for their long-term well-being.

3.2.2. Social Fund and Food Aid

In addition to providing support through fertilizer subsidies, the Rang Mudo Farmers Group also manages a social fund program that acts as a social safety net for its members. This social fund is used for various essential purposes, especially for members facing economic difficulties. The allocation of the social fund focuses on two main aspects: food aid for underprivileged families and educational assistance for the children of farmers who need support to continue their education. This program highlights the strong commitment of the Rang Mudo Farmers Group to maintaining the social well-being of its members, not only in the context of agricultural economics but also in broader social aspects.

The food aid program is one tangible expression of the farmers' group's commitment to its members who are facing economic hardship. The aid consists of basic necessities such as oil, eggs, instant noodles, and school supplies like uniforms and writing materials for the children of farmers. Through this food aid, the Rang Mudo Farmers Group aims to ease the economic burden on farming families, particularly those affected by difficult conditions such as crop failure or market price fluctuations. In such situations, many farming families experience a significant decline in income, making it difficult to meet daily needs. The food aid not only provides direct economic benefits to the recipient families but also fosters a sense of security and social support during tough times.

Beyond the economic aspect, this program plays a crucial role in building and strengthening solidarity among the members of the farmers' group. Solidarity is one of

the key pillars of social life within the farmers' group, as collective action and mutual assistance allow the group to face greater challenges more effectively. With the social fund program in place, members feel that they support one another in difficult times, ensuring that no one is left behind. This solidarity creates stronger social bonds among the members, motivating them to collaborate and contribute to the overall success of the group.

In addition to food aid, the Rang Mudo Farmers Group also provides educational assistance for the children of farmers. Education is a long-term investment that is highly important for farming families, especially in the context of poverty alleviation in rural areas. However, many farming families struggle to afford their children's education, especially when household income is unstable due to factors like poor weather or market fluctuations. Through the social fund, the farmers' group provides support for educational needs, such as covering the cost of school uniforms, books, and learning materials. This program not only offers direct benefits to farming families but also raises awareness of the importance of education within the farming community.

The impact of the social fund program is clearly evident in the daily lives of farmers and their families. The food and educational assistance provided by the farmers' group helps alleviate the financial burden on families, allowing them to focus on agricultural activities without worrying about basic household needs. On the other hand, the success of this program is also reflected in how group members support and assist one another. This solidarity is manifested in various forms, from financial assistance to moral support for members facing difficult times. For instance, during times of crop failure, economically better-off members often help those in need by sharing harvests or providing interest-free loans.

In addition to fostering internal solidarity among group members, the social fund program also has a broader social impact in the Nagari Paninjauan community. The aid distributed by the farmers' group is not limited to its members but also reaches the surrounding community in need. This strengthens the role of the farmers' group as a social institution that functions not only for the economic benefit of its members but also for the overall welfare of the community. For example, on several occasions, the Rang Mudo Farmers Group has provided food aid to families outside the group who are experiencing economic hardship. This demonstrates that the group has evolved beyond a mere economic organization and has become a social change agent within the community.

The social fund program run by the Rang Mudo Farmers Group also highlights that the success of a farmers' group is not solely measured by its economic achievements, but also by how it responds to the social challenges faced by its members. The aid provided by the group not only meets basic needs but also fosters a sense of belonging and responsibility among its members. Through this program, the farmers' group has built a strong social support system where each member feels cared for and supported in facing various economic and social challenges. This program also reduces the group's

dependence on external aid, as they have an internal system ready to help in times of crisis.

Moreover, the program helps prevent the exodus of farmers from rural areas to urban centers. When farmers feel that they have strong social support in their communities, including economic assistance through the social fund, they are more likely to stay in their villages and continue working in agriculture. This is crucial for ensuring the sustainability of the agricultural sector, especially in rural areas like Nagari Paninjauan. With the support of the farmers' group, farmers have a greater incentive to remain in the agricultural sector, even during economically challenging times.

Overall, the social fund and food aid program managed by the Rang Mudo Farmers Group has had a profoundly positive impact on the economic, social, and educational well-being of its members. With this program in place, the welfare of the farmers' group members is maintained, and their solidarity is strengthened. The success of this program also demonstrates that empowering farmers should not only focus on agricultural productivity but also on the holistic social and economic well-being of farming communities.

3.2.3. Social and Economic Impacts of Farmers Group Collaboration

The Rang Mudo Farmers Group has successfully built a strong network of collaboration with various parties, including both government and private sector entities. This network of cooperation has become one of the main pillars of success for this community service program. Through collaboration with relevant government agencies, non-governmental organizations (NGOs), and financial institutions, the farmers' group has directly benefited from technical assistance, access to financing, and product marketing. The technical support, especially from the local agricultural department, includes guidance on the use of appropriate technology, efficient land management, and pest control. New technologies introduced, such as rice blower machines and water-efficient irrigation methods, have helped farmers improve their production efficiency. This enables them to maximize crop yields while reducing operational costs, ultimately increasing their income.

This collaboration has also opened opportunities for farmers to develop their businesses by gaining access to broader markets. Before this collaboration, farmers in Nagari Paninjauan faced limitations in accessing markets beyond their local area, which often restricted their bargaining power and the prices of their agricultural products. However, with the support of the government and the private sector, the farmers' group can now sell their products in more competitive markets, both regionally and nationally. Through these broader marketing networks, farmers can sell their agricultural produce at better prices, significantly increasing their income. Moreover, product diversification has been introduced, such as processing agricultural products into value-added items, providing new economic opportunities for farmers.

Additionally, the economic impact of this program is evident in how the farmers' group has successfully scaled up their farming operations. Financial support from

government-backed financial institutions, such as Kredit Usaha Rakyat (KUR), has enabled farmers to expand their agricultural land and adopt more modern technologies. For example, some farmers within the group have been able to purchase tractors or harvesters, drastically improving their productivity. With expanded land and more efficient agricultural technologies, production scales have increased, not only raising farmers' incomes but also creating new job opportunities for the surrounding community. This expansion has a positive ripple effect on the local economy, with non-farmers benefiting as well, such as through additional jobs in agricultural transport or product processing industries.

Another economic impact is the increased competitiveness of agricultural products from Nagari Paninjauan in local and regional markets. With the technical and financial support gained through this collaboration, the farmers' group has been able to improve the quality of their agricultural products. The products are now cleaner, fresher, and meet the standards desired by the market. As a result, farmers can sell their products at higher prices than before. In the long term, this provides stable and sustainable economic benefits for farmers while enhancing the reputation of agricultural products from the region in broader markets.

In addition to the economic impacts, this community service program has also had significant social benefits. The solidarity built among the members of the farmers' group has become one of the most valuable forms of social capital. This social capital has been fostered through intensive cooperation in every group activity, from technical training and regular discussions to social fund management. The sense of mutual trust and support among members helps the farmers' group navigate various challenges, such as market price fluctuations or unpredictable weather conditions. During crises, group members often help each other, whether through labor sharing, crop sharing, or even internal financial loans. This social capital also encourages innovation and collaboration in finding joint solutions to problems, ultimately strengthening the resilience of the farmers' group.

This social capital also forms the foundation for the sustainability of the community service program in the future. With strong solidarity, the members of the farmers' group have a high level of commitment to maintaining and developing their group. This social capital also strengthens their external partnerships, as parties such as the government or private sector are more willing to invest or provide assistance to a farmers' group with a strong and well-organized internal system. The sustainability of this collaboration depends not only on external support but also on the farmers' group's ability to be self-sufficient and manage their resources sustainably.

Furthermore, the social impact of this collaboration extends to the surrounding community. Through the success of the Rang Mudo Farmers Group, many people who were not initially part of the group have become interested in joining or forming their own farmers' groups. The success of the farmers' group has become a model for community empowerment that can be adopted by other communities. In this sense, the farmers' group serves as an agent of social change, promoting community

transformation through community-based economic growth and close collaboration with various stakeholders.

Moreover, this strong collaboration helps build community resilience in facing global challenges, such as climate change and market volatility. With support from various parties, the Rang Mudo Farmers Group has been able to adapt to changes and seize available opportunities. In increasingly complex situations, such as dependence on unpredictable weather, a farmers' group with an extensive network of cooperation is better equipped to handle these changes. Additionally, the presence of strong social capital helps the community mitigate the negative effects of such changes, both economically and socially.

Overall, the collaboration built by the Rang Mudo Farmers Group has had wide-ranging social and economic impacts, both for its members and the surrounding community. The combination of technical support, market access, and strong social capital has made this farmers' group a successful model for improving rural community well-being through sustainable collaboration.

4. Conclusion

The community service program carried out through the Rang Mudo Farmers Group successfully achieved its main goal of improving the economic well-being of farmers in Nagari Paninjauan. Through collaborative efforts with the government, non-governmental organizations, and the local community, the farmers' group managed to create better access to technology, subsidized fertilizers, financing, and broader markets. As a result, farmers were able to increase their crop yields and expand their farming operations, ultimately leading to higher incomes and improved family welfare.

In addition to economic improvements, the program also had significant social impacts. The social capital built through solidarity and cooperation among the farmers strengthened the group's ability to tackle challenges such as price fluctuations and unpredictable weather conditions. Active involvement in the farmers' group not only enhanced members' technical skills but also fostered strong social bonds among them, creating essential moral and social support in overcoming various agricultural issues.

With a holistic approach that focuses not only on technical aspects but also on social dimensions, this community service program has made a vital contribution to the sustainability of agriculture in Nagari Paninjauan. The program provided not only short-term solutions but also established a strong foundation for more sustainable rural community empowerment, both economically and socially. This empowerment model can be replicated in other areas to support the broader improvement of farmers' welfare and rural communities.

Bibliography

Abdul-Rahaman, A., & Abdulai, A. (2020). "Farmer groups, collective marketing and smallholder farm performance in rural Ghana," *Journal of Agribusiness in Developing and Emerging Economies*, 10(5), 511–527.

Afriansyah. (2020). Analisis Faktor-Faktor Penghambat Pengembangan Kelompok Tani. *Jurnal Riset Rumpun Ilmu Tanaman*, 1(2).

Bungin, Burhan H.M. (2007) *Penelitian Kualitatif : Komunikasi, Ekonomi, Kebijakan Publik, dan Ilmu social*. Jakarta: Kencana Prenama Media Group.

Hermanto. (2011). Pengaruh Kelompok Tani Langkah Awal Peningkatan Kesejahteraan Petani. *Jurnal Pusat Sosial Ekonomi Dan Kebijakan Pertanian*.

Lawang, R. M. (2015). *Jaringan Sosial dan Kepercayaan dalam Pembangunan Ekonomi*. *Jurnal Pembangunan Sosial*, 10(2), 45-67.

Markelova, H., Meinzen-Dick, R., Hellin, J., & Dohrn, S. (2009). Collective action for smallholder market access. *Food Policy*, 34(1), 1–7.

Rahmawati. (2019). *Pemberdayaan Kelompok Tani Mitra Karya Dalam Meningkatkan Pendapatan Keluarga Di Desa Suka Maju Kecamatan Lumbok Seminung Kabupaten Lampung Barat*. Skripsi. Fakultas Dakwah Dan Ilmu Komunikasi Universitas Islam Negeri Raden Intan Lampung.

Saragih, B., & S. (2006). *Kebijakan Pertanian dan Pedesaan: Pilihan dan Implementasinya di Indonesia*.

Sugiyono. (2017). *Metode Penelitian Kombinasi (Mixed Methods)* (Alfabeta (ed.)).

Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta. Alfabeta.

Undang-Undang Republik Indonesia Nomor 19 Tahun 2013 tentang Perlindungan dan Pemberdayaan Petani. (2013). *Lembaran Negara Republik Indonesia Tahun 2013 Nomor 182*. Tambahan Lembaran Negara Republik Indonesia Nomor 5462.