



Analysis of the Role of Local Government in Empowering Rice Farmers (Case Study of Sumber Sari Village, Babulu District, Penajam Paser Utara Regency)

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Abstract

This study aims to analyze the role of the local government in implementing the farmer empowerment program for rice farmers in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency, and to assess the effectiveness of the program in improving farmers' productivity and welfare. Additionally, this study identifies and analyzes the challenges and obstacles faced by the local government in implementing farmer empowerment policies and seeks to understand how these factors influence the success of the program. This study employs a qualitative approach with a descriptive method. Data were collected through observation, in-depth interviews, and documentation, and then analyzed thematically. The findings indicate that the local government plays an active role in empowering farmers through the distribution of granular organic fertilizer funded by the DIPA APBD 1 of East Kalimantan Province. This program aims to enhance agricultural productivity by involving 28 farmer groups in Babulu District, including Sumber Sari Village. Although the program provides benefits to farmers, its effectiveness is still affected by limited access to water, a lack of technical extension services, and suboptimal agricultural infrastructure. The primary challenges in farmer empowerment include dependence on rainfall, land-use conversion, limited training opportunities, market price fluctuations, and the impacts of climate change. To improve the program's success, this study recommends that the local government, particularly the Penajam Paser Utara Agricultural Office, expand farmers' access to subsidies and modern agricultural tools to enhance productivity. Additionally, future research could focus on the effectiveness of irrigation systems in strengthening food security.

Introduction

The core of government policy in agricultural development in Indonesia is farmer empowerment, which began in the New Order era and continues to the current Reformation era. This empowerment is carried out through various programs that actively involve farmers in the entire development process, from planning to utilization of results. The government encourages the involvement of farmers not only as beneficiaries, but also as subjects who play an active role in decision-making and implementation of agricultural activities (Dong et al., 2023; Rostami & Salehi, 2024; Lecoutere et al., 2023; Syafuddin & Meidina, 2023). This policy is also regulated in Law Number 19 of 2013 concerning the Protection and Empowerment of Farmers, which provides protection to farmers from various risks, such as access to production facilities, business certainty, price risk, crop failure, and climate change. In addition, farmers are empowered through education, training, extension, development of marketing systems, and strengthening of farmer group institutions, with the aim of increasing their ability to manage

farming businesses and achieving independence. Thus, this policy aims to improve the welfare and standard of living of farmers as an integral part of agricultural development in Indonesia (Wahyono et al., 2023; Sinring & Buana, 2022; Efrina, 2022; Kamakaula, 2024).

This farmer empowerment policy does not only focus on general aspects, but also on specific commodities that are the mainstay of the agricultural sector in various regions. One example is rice, which is a major commodity in the agricultural sector and is very important for food security and the economy in Indonesia. Sumber Sari Village, Babulu District, Penajam Paser Utara Regency, is one of the significant rice producing areas in East Kalimantan. Although the potential for rice farming in this village is quite large, farmers often face various challenges in increasing productivity and farmer welfare. The local government has a strategic role in planning and managing the agricultural sector, as regulated in Law Number 23 of 2014 concerning Regional Government, which emphasizes that agriculture is part of the concurrent affairs between the central and regional governments. In Penajam Paser Utara (PPU) Regency, the agricultural sector, especially in Babulu District as the food barn of East Kalimantan Province, is a top priority in supporting food security and community welfare. Based on PPU Regency Regional Regulation Number 12 of 2017 concerning the Implementation of Agribusiness and Agroindustry, agribusiness and agroindustry planning must be carried out systematically, integrated, and accountably, prioritizing the use of local resources and environmental sustainability (Surya et al., 2021; Agripino et al., 2023; Sheyoputri, 2024; Alvarez-Ochoa et al., 2024).

However, various challenges such as limited raw water sources for irrigation are the main obstacles for farmers in Babulu. The local government has taken strategic steps by coordinating with the central government to support the development of agricultural infrastructure, including the Telake Movable Dam and Lambakan Dam. In addition, regional policies also emphasize improving farmer skills through education and training so that the agricultural sector can develop further. Therefore, this study aims to evaluate the effectiveness of the role of local government in empowering rice farmers in Babulu, with a focus on the implementation of policies and programs that have been implemented and their impact on farmer welfare. In the development of the agricultural sector in Penajam Paser Utara Regency, there is a significant gap between the potential and the realization of its growth. Although the agricultural sector has been recognized as one of the backbones of the economy, especially with its role as a national food provider and a major contributor to GDP, in reality this sector is still often not prioritized in regional development policies. This causes the agricultural sector to be unable to develop optimally, even amidst global challenges such as climate change and demands for green economic growth (Aluwani, 2023; Oluwole et al., 2021; Hariram et al., 2023; Shah et al., 2021).

In addition, the relocation of the National Capital to Penajam Paser Utara Regency has major implications for food needs, but the readiness of this region to become the main food buffer still needs to be studied in more depth. On the other hand, the absence of synergistic management between the production sector (on-farm) and the post-harvest sector (off-farm) has worsened the situation, where the inability to handle, overproduction has led to price instability and poor farmer welfare. This gap indicates the need for a more comprehensive and adaptive strategic approach in planning for agricultural sector development, which currently has not been fully answered by existing policies (Strategic Plan of the Penajam Paser Utara Regency Agriculture Service for the period 2024–2026).

In the effort to develop the agricultural sector in Penajam Paser Utara Regency for the next five years, identifying problems that affect the services of the Agriculture Service is a crucial step. The main problems identified include the suboptimal use of agricultural land, with some land

not being used for rice plants, and low productivity in the livestock and plantation sectors. In addition, inadequate agricultural infrastructure hinders the efficiency of distribution and services. From the internal side, weaknesses such as high land conversion, significant poverty rates in agricultural areas, and limited utilization of natural resource potential worsen the situation (Ziadat et al., 2022; Wassie, 2020). External challenges, including the impact of climate change and lack of infrastructure, add to the complexity of the problems faced. In this case, research on the role of local government in empowering rice farmers in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency is very relevant. This study aims to analyze the effectiveness of local government interventions in supporting rice farmers, with a focus on providing training, access to capital, developing the necessary infrastructure, and adaptation strategies to climate change.

Penajam Paser Utara (PPU) Regency has the agricultural sector as one of the main pillars of the regional economy. Agricultural production in Penajam Paser Utara (PPU) Regency, which includes Babulu, Waru, Penajam, and Sepaku Districts, has experienced a downward trend in the last four years. Total production decreased from 59,407.90 tons (2021) to 38,324.83 tons (2024), with a significant decline especially in Sepaku District, which is thought to be affected by land conversion due to the construction of the Indonesian Capital City (IKN). Babulu remains the largest contributor to production, while Waru shows a slight recovery in 2024. Babulu District, as the largest contributor to agricultural production in PPU, plays a strategic role in food security and farmer welfare. However, agricultural production data shows a significant downward trend in Babulu in the last four years, from 42,516 tons in 2021 to 28,635.93 tons in 2024.

Evaluation of local government policies and strategies is important to understand how interventions can improve productivity and land management (Deininger et al., 2012; Cocklin et al., 2007; Woestenburg et al., 2019). The findings of this study are expected to provide useful insights for improving agricultural sector services and improving farmer welfare in Penajam Paser Utara Regency. Empowering rice farmers requires an active role from local governments in providing various supports, both in the form of policies, infrastructure, and development programs. Local governments are expected to play a strategic role in overcoming problems faced by farmers, such as access to agricultural technology, capital, training, and markets. However, in practice, the effectiveness of the role of local governments is often influenced by various factors, including available resources, coordination between institutions, and local community participation. Therefore, it is important to analyze how local governments in Penajam Paser Utara Regency, especially in Sumber Sari Village, contribute to empowering rice farmers and the extent to which existing policies and programs can meet the needs and expectations of farmers.

The concept of farmer empowerment in this study emphasizes the strategic role of local governments in increasing the capacity and welfare of farmers through targeted and sustainable policies. The implementation of Law Number 19 of 2013 and regional regulations, such as the Regional Regulation of Penajam Paser Utara Regency Number 12 of 2017, shows that empowerment does not only include protecting farmers from farming risks, but also increasing access to technology, infrastructure, and strengthening farmer institutions. Sumber Sari Village, Babulu District, the success of farmer empowerment is highly dependent on the effectiveness of regional policies in providing comprehensive support, especially in increasing agricultural productivity and market access. Thus, this study underlines the importance of synergy between local governments, farmers, and other stakeholders in creating a more independent and competitive agricultural system, in order to realize food security and sustainable community welfare. This study aims to analyze the role of local government in

empowering rice farmers in Sumber Sari Village, with a focus on policies and programs that have been implemented and their impact on farmer welfare. With this analysis, it is expected to find recommendations to improve the effectiveness of the role of local government in supporting the agricultural sector in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency.

Methods

A qualitative approach is used in this study, emphasizing the importance of the human element as a research instrument. This approach allows researchers to make better adjustments to the reality that occurs in the field. Kirk and Miller (in Campbell, 2000) define qualitative research as a tradition in social science that relies on direct observation of humans and interacts with farmers using the language and terms that farmers use. In this qualitative approach, researchers will go directly to the field to research the object of study and interact directly with the community. The goal is to gain an in-depth understanding of the topic being studied, in this case, the Role of Village Government in Farmer Empowerment in Sumber Sari Village, Babulu District, North Penajam Paser Regency. This research is expected to produce new findings in the form of descriptions and presentations of in-depth research results.

This study uses a descriptive qualitative research type. This study aims to collect information about certain phenomena or symptoms by examining the conditions as they are at the time the research is conducted. Descriptive qualitative research focuses on providing detailed descriptions of the phenomena being studied without trying to make broad generalizations. This research was conducted through field research, which involves collecting data directly from the research location.

In this study, researchers have a central role as the main instrument directly involved in data collection. Researchers must conduct participatory observations, interact with rice farmers and local government officials, and conduct in-depth interviews to deeply understand the role of the government in supporting farmer empowerment in the village. Researchers' sensitivity to local social, cultural, and economic conditions is very important so that the data collection process runs effectively and the results obtained are accurate. In addition, researchers must also build good and trusting relationships with participants, so that participants feel comfortable sharing experiences and relevant information.

As data collectors and data analysts, researchers are also responsible for managing information obtained from various sources. In this study, researchers will analyze interviews with farmers and government officials to find patterns, themes, and challenges and opportunities in efforts to empower rice farmers. Data triangulation is carried out to validate the results and avoid bias. Researchers must also be aware that every interaction that occurs in the field requires critical reflection and adjustment of methods if necessary, so that the data collected truly reflects the situation in the field.

In addition, researchers are responsible for maintaining research ethics, such as maintaining participant confidentiality and respecting local norms and values during the data collection process. After the data is analyzed, researchers must be able to compile a research report that is informative and useful for the local government and farmers in Sumber Sari Village. This research was conducted in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency. The researcher chose Sumber Sari Village because he wanted to analyze and understand the role played by the Village Government in implementing rice farmer empowerment. The main focus of this study is to identify how empowerment efforts carried

out by the local government contribute to increasing the yield and ability of rice farmers in the village.

Result and Discussion

Based on the results of an interview with Tumisan, as the Head of the Berkat Usaha Farmers Group in Sumber Sari Village on December 18, 2024, it was discovered that the farmer group he led was trying to support the empowerment of rice farmers by proposing a proposal for the procurement of agricultural production facilities to support rice cultivation activities. However, in practice, the communication relationship between the farmer group and the village government or related agencies is still less than optimal. This is due to the condition of the group members' land which is spread out and not in one area, so that interaction and coordination are limited.

In addition, farmer groups face several major challenges in agricultural activities, including limited water during the planting season, the conversion of rice fields which continues to decrease every year, and minimal training or counseling from the Department of Agriculture. Tumisan also highlighted that although government assistance, such as subsidized fertilizers, is very helpful in increasing farmer productivity, access to these fertilizers is often difficult when needed. Unfortunately, until now, the Berkat Usaha farmer group has never received training or counseling from the Department of Agriculture, so that farmers' knowledge and skills in managing agriculture are still limited.

Based on an interview with Sasmito, as the Head of the Bina Bersama Farmers Group in Sumber Sari Village on December 18, 2024, it was discovered that the farmer group he led rarely actively facilitated membership because it was constrained by consumption problems, such as eating and drinking in every group activity. However, communication with the village government was quite good, although not optimal in several technical aspects of agriculture.

The Bina Bersama Farmers Group faces various major challenges in agricultural efforts, including the problem of flooding that often occurs during the rice planting season, lack of information regarding the use of pesticides and their active ingredients, and ongoing land conversion. In addition, farmer groups also have difficulty in obtaining seed assistance, so they can only use derivative seeds, which have the potential to reduce the quality of the harvest. Sasmito also expressed the hope that the government could facilitate the construction of dams to overcome the problem of water availability. In terms of empowerment, government assistance, especially in the form of subsidized fertilizers, is considered quite good and beneficial for farmers. However, access to these fertilizers is often difficult when needed, thus hampering agricultural productivity (Alta et al., 2021; Nyambo et al., 2022). In addition, until now, the farmer group has never received training or counseling from the Department of Agriculture, which has limited knowledge and skills in managing farming businesses more effectively and sustainably.

Based on an interview with Hariyanto, as the Head of the Harapan Jaya Farmer Group in Sumber Sari Village on December 18, 2024, it was discovered that the farmer group he led rarely facilitated membership because it was constrained by consumption problems in every activity, such as eating and drinking. However, communication between the farmer group and the village government was going quite well, although there were still obstacles in several technical aspects of agriculture (Reissig et al., 2022; Agir et al., 2023).

Hariyanto revealed that the farmer group faced various challenges in farming, including high pest and disease attacks that had an impact on harvest yields, conversion of agricultural commodities that reduced the area of productive rice fields, and lack of attention from pest

observers who rarely visited the location. In addition, the rice planting pattern that should have been implemented could not be carried out optimally due to limited adequate facilities and infrastructure.

In terms of empowerment, Hariyanto stated that government assistance, especially in the form of subsidized fertilizer, greatly helped farmers in reducing production costs. However, farmer groups still have high hopes that the government can provide more attention, especially in the form of pest control assistance and distribution of quality rice seeds. In addition, until now, farmer groups have never received training or counseling from related agencies, which has limited the capacity of farmers to manage agriculture more effectively and sustainably (Bourne et al., 2021; Antwi-Agyei & Stringer, 2021; Ma et al., 2023).

Based on an interview with Evan, as the Head of the Jadi Makmur Farmers Group in Sumber Sari Village on December 18, 2024, it was discovered that the farmer group he led had received official assistance from the government, in the form of rice seeds and agricultural business assistance. This assistance plays an important role in supporting farmer empowerment in the area. In addition, the communication relationship between the farmer group and the village government is quite good, which allows coordination regarding various agricultural programs.

However, Evan said that the farmer group still faces a major challenge, namely the conversion of agricultural commodities. He hopes that the government can issue regulations that can overcome this problem so that the sustainability of agriculture is maintained. Although there are various obstacles, the empowerment program that has been implemented has provided quite a lot of benefits for farmers, especially in reducing the burden of production and improving welfare. On the other hand, the farmer group led by Evan has never received training or counseling from the relevant agencies. This is a concern, considering that training and counseling are very important in increasing the capacity of farmers to manage agriculture more efficiently and sustainably. Therefore, more attention is needed from the relevant parties to provide assistance and education programs for farmers in Sumber Sari Village.

Based on an interview with Warsito, as the Head of the Mekar Jaya Farmer Group in Sumber Sari Village on December 18, 2024, it was discovered that some farmers in his area had changed the function of commodities on their rice fields. However, the communication relationship between the farmer group and the village government is still running quite well, so that coordination in various aspects of agriculture is maintained.

However, the farmer group faces a number of major challenges, including the availability of irrigation which is not always sufficient when needed. In addition, regarding assistance from the government, only the group leader receives information regarding its use, so that the distribution of information to group members is not optimal. Warsito also revealed that agricultural information and technology provided by the government is often not implemented because farmers feel less confident in its effectiveness, one of which is in the application of organic farming.

In terms of empowerment, government assistance, especially organic fertilizers, is considered less than optimal because many farmers do not know how to use it. As a result, some farmers use it, while others choose not to use it. In addition, until now, the farmer group led by Warsito has never received training or counseling from the relevant agency. This is a concern because training is very much needed to improve farmers' skills in implementing more effective and sustainable agricultural technology.

Based on an interview with Maniso, as the Head of the Sumber Makmur Farmer Group in Sumber Sari Village on December 21, 2024, the farmer group he leads has a village area of

around 20 hectares which is used as a pilot area. This effort aims to prevent the conversion of agricultural land to other sectors. In terms of communication, the relationship between the farmer group and the village government is going well, so that coordination related to agricultural programs can be carried out smoothly.

However, the farmer group faces major challenges, especially in the conversion of agricultural commodities to oil palm plantations. This change has the potential to reduce productive land for rice farming. In addition, Maniso revealed that the farmer empowerment program still has obstacles, especially in the distribution of rice seed assistance. Often, when farmers need seeds, the stock is not available, but after the planting season is over, the seeds are just distributed. This causes inefficiency in the use of assistance. In addition, until now, the Sumber Makmur farmer group has never received training or counseling from the relevant agency. This lack of training is an obstacle for farmers in developing skills and increasing their agricultural productivity (Saleem & Raouf, 2011; Heryanda & Purbadharmaja, 2021).

Based on an interview with Abdul Jadi, as the Head of the Tani Makmur Farmers Group in Sumber Sari Village on December 21, 2024, the farmer group has received assistance in the form of anti-acid and semok which have a positive impact on plant growth. However, socialization regarding how to use the assistance was not conveyed directly to farmers, so its effectiveness has not been optimal. In terms of communication, the relationship between the farmer group and the village government is going well, although there are still various obstacles in agricultural management. Farmer groups face several major challenges, including the conversion of land from agriculture to oil palm plantations, which reduces the area of rice planting. In addition, the harvested grain is often not absorbed in the market because it does not meet the established quality standards.

Rat pest attacks are also a serious threat to agricultural production, exacerbated by planting patterns that are not carried out simultaneously, which contributes to the spread of pests. The availability of subsidized fertilizers is often insufficient, while information regarding the distribution time is unclear, making it difficult for farmers to plan optimal fertilization. In terms of empowerment, Abdul Jadi revealed that the organic fertilizer assistance provided by the government is often not accompanied by socialization on how to use it. As a result, many farmers do not know how to apply fertilizer effectively, which has the potential to reduce the benefits of the assistance. In addition, until now, the Tani Makmur farmer group has never received training or counseling from the relevant agencies, which should be able to improve farmers' knowledge and skills in managing land more productively.

Based on an interview with Hairul Anam, as the Head of the Tunas Jaya Farmer Group in Sumber Sari Village on December 21, 2024, the farmer group has received assistance such as anti-acid and semok which have a good impact on plant growth. However, there was no socialization regarding how to use it to farmers, so its utilization has not been optimal. In addition, regarding agricultural tools and machinery (alsintan), only farmers who have money can access it because they have to pay a fee. In fact, alsintan is used more outside the farmer group as a source of personal income, so it provides less benefit to group members. Hairul Anam also said that seed assistance is available, but is often not provided at the right time. As a result, when farmers are going to use it, the seeds have passed their dormancy period, so their quality decreases. On the other hand, people's interest in farming is decreasing. Therefore, the farmer group hopes that the village government can play a more active role in maintaining the sustainability of agricultural land, for example by asking first before residents sell their land so that there is no conversion of land into oil palm plantations. Although the communication relationship between the farmer group and the village government is running well, the Tunas

Jaya farmer group has never received training or counseling from the relevant agencies. This is one of the obstacles in increasing the capacity of farmers to manage agriculture more effectively and sustainably.

Based on an interview with Sukarno, a member of the Suka Maju Farmer Group in Sumber Sari Village on December 18, 2024, the farmer empowerment program provided by the government, such as rice seed assistance, has not provided optimal benefits. This is due to the quality of seeds that often do not grow optimally, so that the harvest obtained by farmers does not match expectations. Nevertheless, the communication relationship between farmer groups and the village government is going well. However, one of the main obstacles faced by farmer groups is the lack of training or counseling from related agencies. In fact, training and technical assistance are very much needed to increase the capacity of farmers in managing agriculture more effectively and sustainably.

The Role of Local Government in the Implementation of the Rice Farmer Empowerment Program in Sumber Sari Village, Babulu District

The rice farmer empowerment program through the distribution of granular organic fertilizer in Babulu District, including Sumber Sari Village, shows the active role of the local government, especially through the DIPA APBD funding source

1 of East Kalimantan Province which funds the Agricultural Intensification Program (PIP). This program aims to increase agricultural productivity by distributing granular organic fertilizer received by 28 farmer groups, including in Babulu District. The local government, through the implementation of this program, is trying to encourage increased agricultural yields with a target of increasing rice productivity from 2.5 tons/ha to 3.5 tons/ha. In addition, this program also aims to increase harvest intensity from 1.5–2 times to 2 times per year. The program clearly shows the local government's commitment to supporting the agricultural sector, which is expected to improve farmer welfare.

In terms of effectiveness, although this program is still in the implementation stage, the data shows significant changes in the target productivity and harvest intensity. The success of this program can be seen from the efforts to increase agricultural yield targets and more frequent harvest frequencies, which in turn have the potential to increase farmers' income. However, the effectiveness of the program also greatly depends on continuous supervision and monitoring of its implementation, as explained in the monitoring of agricultural conditions through field observations carried out by related agencies.

Challenges and Obstacles in Empowering Rice Farmers in Sumber Sari Village

Although this rice farmer empowerment program has great potential, challenges and obstacles remain in its implementation. One of the main challenges is the diversity of conditions and capabilities of the farmer groups involved. In Babulu District, for example, farmer groups have a varying number of members between 16 and 45 people per group, which can affect the coordination and effectiveness of program implementation. In addition, the area of land managed by each group also varies, with some groups managing smaller areas of land, while others have larger areas of land, so the distribution of organic fertilizer must be adjusted to the needs of each.

Another challenge is technical problems in the application of organic fertilizer, such as difficulties in assessing the suitability between the amount of fertilizer received and the area of land managed and the potential difficulty in adopting new technology by farmers. In this case, the role of the local government in providing counseling and training for farmers is very

important. Despite these challenges, the evaluation conducted by the relevant agencies serves to ensure that the program continues to run according to plan and is able to provide a real positive impact on farmers. In addition, external factors such as weather changes and market price fluctuations can also affect the success of this empowerment program. For example, if the dry season comes early or the price of agricultural commodities decreases, even though organic fertilizer has been distributed, agricultural yields will not be optimal. Therefore, challenges in terms of resilience to climate change and economic fluctuations also need to be considered in efforts to empower farmers. Overall, the role of the local government in implementing the rice farmer empowerment program in Sumber Sari Village and the challenges faced in its implementation show that the success of the program is highly dependent on good collaboration between the government, farmer groups, and related agencies. Continuous evaluation and monitoring will greatly determine the effectiveness and achievement of the long-term goals of this program. Based on the results of interviews with informants conducted in several locations in Babulu District, there are various issues that are of primary concern based on the interview results:

The Role of Local Government in Empowering Rice Farmers

Local governments play an important role in implementing rice farmer empowerment programs in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency. Based on interviews with various farmer groups, it was found that the government has provided several forms of assistance, such as subsidized fertilizers, rice seeds, and farmer empowerment programs. However, the effectiveness of these programs still faces various obstacles. Based on an interview with Tumisan (Head of the Berkat Usaha Farmers Group), one of the main problems faced by farmers is limited access to water resources and damaged irrigation systems. The absence of reservoirs or other natural water sources makes farmers very dependent on rainfall and pump wells, which are often insufficient, especially in the dry season. This shows the need for more attention from local governments in building and repairing irrigation infrastructure to increase agricultural productivity.

On the other hand, an interview with the Head of the Jadi Makmur Farmers Group, Evan, showed that the assistance in the form of seeds and farming efforts provided by the government has been quite helpful for farmers. However, the problem of land conversion is still a threat to the sustainability of the agricultural sector. For this reason, stricter policies are needed to regulate the use of agricultural land so that it does not continue to shift to other sectors, such as oil palm plantations. In addition, interviews with Sasmito (Head of the Bina Bersama Farmers Group) and Hariyanto (Head of the Harapan Jaya Farmers Group) showed that training and counseling for farmers are still very minimal. Although the government has provided subsidized fertilizer assistance, the lack of counseling on planting patterns, pesticide use, and pest control is a major obstacle in increasing agricultural productivity.

This confirms that government intervention needs to be focused not only on providing material assistance, but also on aspects of education and technical assistance for farmers. The local government has a strategic role in implementing the rice farmer empowerment program in Sumber Sari Village, Babulu District, Penajam Paser Utara Regency. Based on interviews with the Head of the Agriculture Service, there are several policies implemented to increase farmer productivity and welfare. These policies include assistance on shifting planting patterns, pest and disease control, use of superior seeds, increasing the planting index (IP), agricultural mechanization, and developing organic farming. In addition, the local government also implemented the Regional Regulation on Sustainable Food Land (LP2B) to improve more integrated agricultural patterns. The Agriculture Service also supports the management of

agricultural resources with a focus on organic farming, considering that Sumber Sari Village has great potential in this sector. The local government also involves local communities in every stage of planning through the Development Planning Deliberation (Musrenbang), so that farmers' aspirations can be accommodated in the policies implemented.

However, in the implementation of this program, several major challenges were found, especially in terms of access to technology and markets. Limited irrigation infrastructure is still a major obstacle, where proposals for dam construction have been submitted but have not been realized. In addition, the quality of rice produced by farmers is still below market standards due to the high level of broken rice (>14%) and the high-water content of the grain. The local government has tried to help farmers by improving market access through cooperation with local companies and traditional markets, although absorption by Bulog is still hampered by quality standards that have not been met.

Challenges and Obstacles in Empowering Rice Farmers

The results of the interviews showed that the local government faces various challenges in implementing the rice farmer empowerment program in Sumber Sari Village. The main challenges identified include infrastructure problems, access to information, and conversion of agricultural land.

Infrastructure problems are a significant obstacle, as conveyed by Tumisan who highlighted the total damage to the irrigation system. The absence of dams or permanent water sources makes it difficult for farmers to manage agricultural land, especially in the dry season. In addition, interviews with Sasmito and Hariyanto showed that flooding during the planting season is also an obstacle, which can damage rice plants and reduce yields. This shows the need for government intervention in building a better water management system, including the construction of dams and effective drainage systems.

In terms of access to information and education, interviews with Warsito (Head of the Mekar Jaya Farmers Group) showed that not all farmers receive adequate information regarding government assistance. Information regarding the distribution of organic fertilizers and training programs is often only known by the head of the farmer group, so that many group members cannot optimally utilize the assistance. In addition, although the government has introduced new agricultural technologies, such as organic farming, many farmers are reluctant to implement them due to lack of assistance and understanding.

The conversion of agricultural land is a major challenge that hinders the sustainability of farming in Sumber Sari Village. As conveyed by Evan and Maniso (Head of the Sumber Makmur Farmers Group), some farmers have converted their rice fields to plant other commodities. The efforts of the farmer group to maintain agricultural land by providing a 20-hectare pilot area are a positive step, but still require stricter regulatory support from the local government to prevent further land conversion.

The challenges faced in empowering rice farmers in Sumber Sari Village include various technical, economic, and social aspects. One of the main obstacles is farmers' dependence on government assistance. Based on an interview with the Head of Agricultural Extension, farmers' mindsets still need to be changed to be more independent in running their farming businesses. The government has attempted to address this through farm management training and organic rice cultivation training. In terms of technical aspects, the Head of Agricultural Facilities and Infrastructure revealed that monitoring is carried out periodically at the pre-planting and post-planting stages to ensure optimization of agricultural land. Technologies introduced to increase productivity include the use of agricultural mechanization such as

combine harvesters, cultivators, and transplanting machines. However, the effectiveness of this technology still depends on the readiness of farmers to operate these tools. Therefore, the local government is trying to involve young farmers in the use of agricultural mechanization so that there is regeneration of the workforce in the agricultural sector. From the perspective of the Head of Food Crops and Horticulture, the main obstacles faced by farmers include low soil fertility due to extreme pH (2.5-3.5), limited irrigation, pest attacks, and land conversion. The solutions implemented include breeding superior seeds, liming the soil, using anti-acid fertilizers, and building dams to increase irrigation efficiency. However, the success of implementing this policy is still influenced by operational budget constraints that hinder the optimization of program monitoring and evaluation.

Evaluation of farmer empowerment programs is one aspect that still needs to be improved. Based on an interview with the Head of the Agriculture Service, the evaluation system in Sumber Sari Village is still low, especially because there is no reward or punishment system for farmers. In addition, the Head of the Agricultural Extension Division said that monitoring is carried out informally every day and formally every month by Field Extension Officers (PPL). However, this mechanism is still manual and has not been integrated into a more comprehensive system.

The Coordinator of the Babulu Agricultural Extension Center also highlighted that farmers' dependence on government assistance has resulted in a decline in the spirit of mutual cooperation. To overcome this, the local government has made efforts to provide routine extension so that farmers are more independent in carrying out agricultural activities. In implementing the program in the field, an assessment of the farmer's institutional class is carried out, from beginner to advanced levels, as a basis for determining the right policy intervention.

Meanwhile, the Agricultural Extension Officer (PPL) in Sumber Sari Village revealed that limited operational budget is the main obstacle in monitoring and evaluating the program. The evaluation process is still verbal and has not been systematically documented in the form of official documents. This is a challenge for the local government in formulating policies based on more accurate and measurable data. The local government has a very important role in empowering rice farmers in Sumber Sari Village through various strategic policies that include assistance in planting patterns, agricultural mechanization, pest control, and development of organic farming. However, in its implementation there are still various challenges, such as limited irrigation, land conversion, and farmers' dependence on government assistance.

To improve the effectiveness of the program, a better monitoring and evaluation system is needed, including official documentation of program achievements. In addition, efforts to change the mindset of farmers to be more independent in managing their farming businesses are the main key to creating sustainable agriculture. With collaboration between local governments, agricultural extension workers, and farmers, it is hoped that the empowerment of rice farmers in Sumber Sari Village can run more effectively and contribute to improving the welfare of farmers as a whole.

In general, the results of interviews with informants revealed that the agricultural sector in the Babulu District still has many challenges that need to be overcome. The main challenges faced include limited infrastructure, lack of implementation of efficient agricultural technology, fluctuations in commodity prices, and limited market access. Village and sub-district governments have made various efforts to support the welfare of farmers and the community through infrastructure improvements, economic empowerment, and skills training. Technology

has also begun to be applied to improve agricultural efficiency, but there are still gaps in the application and utilization of modern technology that need to be fixed.

To face these challenges, collaboration is needed between local governments, the private sector, and the community to increase support for the agricultural sector, technology extension, and wider market access for agricultural products. Efforts to increase public awareness of the importance of innovation and technology in agriculture must also be encouraged so that the agricultural sector can develop sustainably and have a positive impact on community welfare.

Conclusion

The local government plays an active role in empowering rice farmers through a granular organic fertilizer distribution program funded by DIPA APBD 1 of East Kalimantan Province. This program aims to increase agricultural productivity with a target of increasing rice productivity from 2.5 tons/ha to 3.5 tons/ha and increasing harvest intensity from 1.5–2 times to 2 times per year. The implementation of this program involves 28 farmer groups in Babulu District, including Sumber Sari Village. In addition to fertilizer distribution, the government also provides seed subsidy assistance and other empowerment programs. Based on the results of interviews with farmer groups, it was found that although this program is useful, its effectiveness is still influenced by several factors, such as limited access to water resources, minimal technical counseling for farmers, and suboptimal agricultural infrastructure, such as damaged irrigation systems. The local government has also made efforts to increase the cropping index through policies on cropping pattern assistance, pest control, and agricultural mechanization.

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