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STRENGTHENING LOCAL FOOD SECURITY THROUGH COMMUNITY EMPOWERMENT IN THE PRODUCTION OF MALIKA BLACK SOYBEANS IN TULANG BAWANG REGENCY

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Abstract

Food security does not only on the government's role in its management. Collaboration among the government, private sector, and society is also essential in achieving food self-sufficiency. Food security is not merely about national-scale food production, but also about regional initiatives capable of developing local potential independently and consistently. This study examines efforts to strengthen local food security through community empowerment in the production of Malika black soybeans in Tulang Bawang Regency. As an alternative and relatively new food commodity with high nutritional value and significant economic potential, Malika black soybeans offer opportunities for sustainable agriculture and increased farmer income. Using a descriptive qualitative approach and a case study method, this research analyzes the partnership model between the Tulang Bawang Regency Government and PT Horti Yasmin Jaya in the production of Malika black soybeans. Preliminary results show that the first harvest was successfully carried out despite challenges such as land suitability and planting distance. This collaboration serves as a concrete example of an inclusive food governance strategy, promoting farmer independence and increasing the added value of local commodities as part of regional food security.

Keywords: food security, community empowerment, black soybeans, sustainable agriculture, Tulang Bawang

INTRODUCTION

Food security remains a significant challenge both globally and nationally, especially in the context of post-pandemic recovery and the ongoing threats of climate change and geopolitical instability. According to the Food and Agriculture Organization (FAO), food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life (FAO, 2021). In Indonesia, the government has prioritized food self-sufficiency through a series of national programs. The government aims to achieve food self-

ISSN XXXX-XXXX

sufficiency within the next four to five years, with the ambitious vision of positioning Indonesia as a global food hub. President Prabowo Subianto has committed to realizing this goal through strategic policies, including the development of food estates, enhancement of agricultural infrastructure, and modernization of the agribusiness sector.

However, gaps in implementation and a continued reliance on staple commodities such as rice and imported soybeans remain pressing issues. In this context, local initiatives rooted in community empowerment and sustainable agriculture are increasingly recognized as vital complements to national food strategies.

Tulang Bawang Regency in Lampung Province offers a concrete example of local food resilience through the cultivation of Malika black soybeans—a relatively new commodity in Indonesia, especially in Tulang Bawang. This variety is noted for its high nutritional content and significant economic potential. Currently, the agricultural sector in Tulang Bawang is dominated by commodities such as cassava, palm oil, rubber, maize, and rice. The collaboration between the local government and PT Horti Yasmin Jaya aims to diversify local food sources while improving farmer welfare by introducing a new agricultural commodity. This initiative underscores the regional government's commitment to diversifying its agricultural outputs.

Community empowerment in this context not only provides alternative livelihoods for rural populations but also addresses structural dependency on a narrow set of commodities. Malika black soybeans, rich in protein and antioxidants, also hold strong export potential, making them a strategic crop for both local consumption—especially in the soy sauce industry—and agro-industrial development.

The active participation of local communities in the entire production process—from land preparation, planting, harvesting, to post-harvest handling—reflects a bottom-up approach in local food policy, particularly in Tulang Bawang. This study investigates how such a collaborative model between local government and the private sector contributes to strengthening food security, not only through increased agricultural production but also through the social empowerment of rural communities. By examining this case, the paper seeks to illustrate how newly introduced local commodities can emerge as key drivers in Indonesia's journey toward a more sustainable and inclusive food system. The main research questions addressed in this study are:

1. How does community empowerment contribute to food security in the case of Malika black soybeans?

ISSN XXXX-XXXX

2. What are the challenges and successes of the collaborative model between local government, the private sector, and community actors?
3. What implications does this case have for future regional food policy formulation?

METHODOLOGY

This study employs a qualitative descriptive approach using a case study method to explore how local food security can be strengthened through community empowerment, with a specific focus on the production of Malika black soybeans in Tulang Bawang Regency. The case study method was selected to enable an in-depth investigation of a real-world initiative involving multiple stakeholders, including local government, the private sector, and farming communities.

The study aims to understand the dynamics, strategies, and perceived impacts of the Malika soybean program as implemented in selected villages. This approach is particularly suitable for examining the complexity of governance relationships, community participation, and innovation adoption within a localized agricultural system.

a. Data Collection Techniques

Data were collected through a combination of field observations and document analysis:

1. **Field Observations:** Direct site visits were conducted to observe cultivation practices, seed distribution processes, post-harvest handling, and stakeholder interactions during the planning and implementation stages.
2. **Document Analysis:** This included a review of planning documents such as the Regional Food Security Action Plan, technical cooperation agreements with PT Horti Yasmin Jaya, and project evaluation reports.

b. Research Location

The study was conducted in Tulang Bawang Regency, specifically in Kecubung Jaya Village, located in Gedung Aji Subdistrict, which is directly involved in the Malika black soybean program. The research site was selected purposively based on the village's level of participation in the program.

RESULTS AND DISCUSSION

a. Community Empowerment in the Production of Malika Black Soybeans

The Malika black soybean initiative in Tulang Bawang Regency reflects a significant shift from a top-down food security approach to a community empowerment model. Farmers are no longer positioned merely as laborers, but as partners in planning and

ISSN XXXX-XXXX

decision-making processes. This empowerment is evident through regular technical assistance, capacity-building training, and participatory discussions conducted prior to the planting season.

Field interviews revealed that before the program's implementation, most farmers were unfamiliar with black soybeans and skeptical about their economic value. However, after a series of outreach activities conducted by the Department of Agriculture in collaboration with PT Horti Yasmin Jaya, farmers began to recognize the economic potential of Malika soybeans.

b. Public–Private Collaboration in Local Food Governance

The partnership between PT Horti Yasmin Jaya and the local government serves as a tangible example of inclusive food governance. Unlike conventional aid programs that often end with seed distribution, this collaboration encompasses the entire production cycle—from seed provision, cultivation training, post-harvest processes, to market access.

The black soybean cultivation initiative uses a seed loan system, where PT Horti Yasmin Jaya lends seeds to farmers, who then repay them with a portion of their harvest. Interestingly, PT Horti Yasmin Jaya also purchases the harvested soybeans directly from the farmers at a fixed price of IDR 7.000,00 per kilogram, providing both market certainty and economic benefit. In addition, PT Horti Yasmin Jaya has an agreement or MoU with PT Unilever Indonesia Tbk to sell the harvested Malika black soybeans for processing into sweet soy sauce. PT Horti Yasmin Jaya states that they need at least 25 tons of Malika black soybeans every month to meet market demand. This guarantees the sales flow of agricultural products for farmers.

The local government views this price stabilization mechanism as crucial in building farmers' trust. The Regent of Tulang Bawang has openly expressed support for this initiative as a model of collaborative innovation in agriculture. This aligns with food governance literature, which emphasizes the importance of multi-stakeholder partnerships in enhancing food system resilience and sustainability (Marsden & Morley, 2014).

The Director of PT Horti Yasmin Jaya, Eni Kusrini CPFR, expressed her gratitude during the harvest event, attended by representatives from the Department of Agriculture, sub-district heads, police, military, and community members. She explained:

> *"We initially introduced dwarf coconut varieties in Tulang Bawang, but since these take three years to bear fruit, we sought alternatives to shorten the waiting period. As a solution, we began cultivating Malika black soybeans. These soybeans are essential for national food security and are processed into products like Bangau and ABC soy sauce."*

ISSN XXXX-XXXX

Meanwhile, Nur Khasanah, SP, MM, Head of the Tulang Bawang Agriculture Office, affirmed her support for the initiative:

> *"Alhamdulillah, today marks the first harvest of Malika black soybeans, cultivated on 10 hectares in collaboration with PT Horti Yasmin Jaya. We hope this harvest motivates other soybean farmers and revitalizes the soybean farming spirit in Tulang Bawang."*

c. Socioeconomic Impact and Indicators of Local Food Security

From a social perspective, the community now recognizes that there are other commodities with high economic value that are not too difficult to cultivate. Previously, the community in Tulang Bawang Regency, especially in Kecubung Jaya Village, relied solely on cassava as their primary agricultural commodity. However, after the outreach activities and tangible results from the harvest, the community became interested and started to inquire further about Malika black soybeans through the village government.

From an economic standpoint, Malika black soybeans are considered more profitable than cassava. Malika black soybeans only require 4 months to grow and have a guaranteed price from the company of IDR 7,000.00 per kilogram. In contrast, cassava takes at least 6 months to grow and its price is highly fluctuating, depending on the market, with deductions for harvest yields and starch content measurements. Based on Lampung Governor's Instruction Number 2 of 2025 regarding Cassava Prices, the price of cassava is set at IDR 1,350.00 per kilogram with a maximum deduction of 30% without measuring starch content. Despite the Governor's decision on cassava prices, several companies have refused and chosen to close down. This indicates that cassava lacks price certainty, and the presence of Malika black soybeans can serve as an alternative.

Other benefits of this program include activating idle lands and optimizing the use of previously unproductive marginal areas. Secondly, it creates temporary employment opportunities, particularly for rural youth during land preparation and harvest periods. Furthermore, the program encourages economic diversification among farmers who previously relied solely on commodities such as oil palm, rubber, rice, cassava, or corn.

Using the Food Security and Vulnerability Atlas (FSVA) framework, this intervention indicates improvements in food availability, stability, and access, although long-term data is still needed to confirm its sustainability.

d. Implementation Challenges

Despite promising initial harvest results, the program faces several implementation challenges. One major issue is land suitability. Many farmers struggled to adapt planting

ISSN XXXX-XXXX

distances and drainage systems, as Malika soybeans require different soil conditions compared to rice or cassava.

Based on interviews with relevant parties and document analysis, the estimated yield of Malika black soybeans by PT Horti Yasmin Jaya was 0.2 tons per 1,000 m² or 2 tons per 10,000 m². However, in reality, the actual yield from the first harvest was only 0.1 tons per 1,000 m². From the 22,500 m² of land used, only 2.3 tons were produced. Preliminary evaluations showed that overly dense planting (20x20 cm) contributed to suboptimal yields. The recommended spacing of 30x40 cm would provide plants with better growth conditions. Additionally, Mr. Kuncoro, the landowner, admitted that he used 30 kg of seeds per 10,000 m², whereas the recommended amount is 25 kg per 10,000 m². This resulted in planting that was too close, leading to a lack of nutrients for the plants.

High soil pH due to the absence of dolomite during land preparation negatively affected plant growth and yield. Going forward, the Department of Agriculture and PT Horti Yasmin Jaya are committed to continued technical support, including improved planting spacing, better soil management, and intensive training to significantly increase productivity in the next planting season.

Another challenge is the difficulty in post-harvest support, specifically the tools needed to separate soybeans from their stalks. At the beginning of the harvest, Mr. Kuncoro admitted that he struggled to separate the soybeans from their stalks due to the lack of automatic tools, which meant it had to be done manually, one by one. This consumed a very long time. In the future, Mr. Kuncoro hopes for assistance from the company or government to provide the necessary tools for farmers interested in cultivating this commodity. Furthermore, weak institutional coordination, especially during the early phases, when communication among extension workers, village leaders, and farmers was unclear. Some farmers expressed confusion over the division of roles between the government and the private sector. However, the formation of village-level facilitation teams consisting of farmers, local officials, and agricultural extension workers has gradually improved coordination.

Post-harvest sustainability also remains a concern. Some farmers worry that if PT Horti Yasmin Jaya were to withdraw, Malika soybean production would lose market certainty. Therefore, long-term strategies involving cooperatives or village-owned enterprises (BUMDes) are essential to strengthen farmers' bargaining power and ensure the program's continuity.

ISSN XXXX-XXXX

To ensure sustainability, the following prerequisites must be met:

1. Consistent local government policies supporting agro-industry development, including budget allocations, agricultural incentives, and institutional strengthening.
2. Diversification of partners to reduce dependency on a single off-taker. The government could explore partnerships with food cooperatives or export market networks.
3. Development of local value chains such as soy sauce, tempeh, or soybean snacks to create added value in villages and generate entrepreneurial opportunities, particularly for youth. Youth involvement in product innovation and digital marketing is essential to prevent program stagnation.

The program shows strong potential for replication in other areas of Tulang Bawang and across Lampung Province. However, local adaptation is necessary, especially in terms of agroecological conditions, farming culture, and village institutional readiness. A participatory approach and periodic evaluations will be key to success in new locations.

e. Sustainability and Replication Potential

The sustainability of this empowerment model depends on three main elements:

1. Ongoing commitment from the local government, particularly in land mapping, irrigation support, and financial assistance for farmers.
2. Continued buyback policy from PT Horti Yasmin Jaya.
3. Growth of local cooperatives, especially BUMDes, and the active involvement of youth in post-harvest processing activities.

The success of this pilot program makes it a strong candidate for replication in other sub-districts or even other provinces. However, adaptation processes must account for ecological, institutional, and socio-cultural differences to ensure optimal outcomes

CONCLUSION AND RECOMMENDATIONS

This study confirms that strengthening local food security through community empowerment in the production of *Malika* black soybeans in Tulang Bawang Regency has yielded positive outcomes. The partnership model involving local government, farmers, and the private sector—specifically PT Horti Yasmin Jaya—has proven to be a key driver of the program's success. The participatory approach, which emphasizes active farmer involvement at every stage of production, has significantly enhanced the community's technical and social capacities.

ISSN XXXX-XXXX

Socioeconomically, the program has succeeded in actualizing the potential of marginal land, creating new employment opportunities, and increasing farmers' incomes. Furthermore, the diversification of local agricultural commodities has made a tangible contribution to food security at both the village and regency levels. Despite the presence of several technical and coordination challenges, synergy among stakeholders has effectively addressed these issues.

From a sustainability perspective, the program holds substantial potential for replication and broader implementation, particularly if supported by consistent policy frameworks and the strengthening of local institutions. Digital transformation and product innovation are also critical to maintaining the relevance and competitiveness of *Malika* black soybeans in local and national markets.

This research highlights that local food security enhancement through community empowerment in *Malika* black soybean production constitutes a strategic effort that successfully integrates local resource potential with multi-stakeholder collaboration. The cooperative model among local government, farmers, and private companies has fostered an effective and sustainable framework that not only boosts production capacity but also improves economic welfare.

Technically, the empowerment program has optimized previously underproductive agricultural land through the application of appropriate technologies and cultivation methods adapted to local conditions. The success of the first harvest, despite challenges such as land suitability and spacing, demonstrates the program's technical viability. Socially, community empowerment has enabled active farmer participation in planning and decision-making processes, fostering a sense of ownership and commitment to the program. This empowerment has also contributed to reducing local unemployment and increasing household income among farming families.

Moreover, this initiative illustrates that food security is not solely the responsibility of the central government but must also be supported by concrete efforts at the local level through the utilization of economically valuable local commodities. The production of *Malika* black soybeans, with an emphasis on sustainability and nutritional value, serves as a compelling example of how local food diversification can support regional and national food security. Nonetheless, several challenges remain, including limited technical knowledge among farmers, suboptimal market access, and gaps in stakeholder

coordination. These issues require serious attention to ensure that the program's outcomes can be further improved and sustained.

Based on the research findings, the following strategic recommendations are proposed to reinforce and expand the success of the program:

1. **Policy Strengthening and Local Government Support**. Tulang Bawang Regency Government is encouraged to reinforce its policy support, including allocating specific budgetary resources for the development of *Malika* black soybeans and facilitating continuous training for farmers. Regulations that support public-private partnerships and provide incentives for agribusiness actors are also necessary.
2. **Development of Farmer Institutions and Local Cooperatives**. The establishment and strengthening of farmer cooperatives or Village-Owned Enterprises (BUMDes) are essential for managing production, marketing, and processing of black soybean products independently. This will also reduce dependency on a single off-taker and strengthen farmers' bargaining position.
3. **Product Diversification and Digital Marketing**. Innovation in the processing of *Malika* black soybeans into various derivative products and the development of digital marketing strategies should be enhanced. Engaging younger generations in information technology utilization will help expand market reach and increase product value-added.
4. **Capacity Building and Technology Transfer**. Ongoing training and intensive technical assistance are necessary to improve farmers' adaptation to climate change and the latest agricultural technologies. The provision of environmentally friendly and efficient technologies is highly recommended.
5. **Regular Monitoring and Evaluation**. Government and program partners should implement regular evaluations to ensure that objectives are being met and issues are addressed promptly. Community involvement in monitoring processes will further enhance accountability and transparency.

With these strategic steps, it is expected that the empowerment program for *Malika* black soybean production can serve as a leading model for strengthening local food security and promoting community-based economic development in Indonesia.

ISSN XXXX-XXXX

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