



Research Article

## The Impact of Food Security Policies on the Welfare of Farmers in West Aceh Regency

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### Abstract

This study aims to analyze the impact of food security policies on farmer welfare in West Aceh Regency. This research uses a qualitative method with a case study approach. Data were collected through interviews, observations, and documentation, using purposive sampling involving farmers and relevant government institutions such as the Food Service and the Agricultural, Food Crops, and Horticulture Service. The results show that food security policies have contributed to maintaining food availability and improving food access at the regional level, as reflected in stable production and government support programs. However, their impact on improving farmer welfare remains limited and uneven. Structural constraints such as limited irrigation systems, uneven distribution of agricultural inputs and machinery, weak market connectivity, and limited access to production resources continue to affect farmers' productivity and income stability. In addition, not all farmers have fully benefited from government assistance due to uneven implementation and limited access to information. This study concludes that food security policies in West Aceh Regency have not yet fully improved farmer welfare and require strengthening infrastructure, institutional coordination, and market access to achieve more effective and sustainable outcomes.

**Keywords:** Policy Impact, Food Security, Welfare, Farmers, West Aceh Regency

Submission : Oktober 08, 2025  
Revised : December 28, 2025  
Accepted : January 29, 2026

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## Introduction

Welfare is a fundamental objective in national development and is explicitly reflected in the fifth principle of Pancasila, which emphasizes social justice for all Indonesian people. Welfare refers to a condition in which individuals and communities are able to meet their basic needs, achieve economic stability, and maintain a decent quality of life (Gunawan, 2020; Merdiani et al., 2025). In the agricultural sector, farmer welfare is closely related to income stability, access to production resources, government support, and the effectiveness of policies designed to strengthen agricultural productivity and sustainability (Republik Indonesia, 2013). Farmers play a strategic role as primary food producers, making their welfare essential not only for their own livelihoods but also for ensuring national and regional food security (Republik Indonesia, 2012).

Food security policies are one of the main instruments used by governments to ensure food availability, accessibility, and proper utilization (Food and Agriculture Organization, 2008). At the global level, international organizations such as FAO, IMF, World Bank, WFP, and WTO issued a Joint Statement on February 8, 2023, emphasizing the urgent need for concrete and coordinated actions to address worsening global food insecurity (Nations, 2023). These actions include protecting vulnerable populations from hunger, strengthening agricultural and food market systems, and reforming subsidy programs to make them more effective and targeted (World Bank, 2022). These global challenges demonstrate that food security policies play a crucial role in supporting agricultural sustainability and improving farmer welfare.

At the national and regional levels, Indonesia has implemented various legal and policy frameworks to strengthen food security and improve community welfare. In Aceh Province, food security policies are regulated through several regional regulations, including Qanun Aceh No. 11 of 2022 concerning food reserve management, Qanun Aceh No. 2 of 2022 concerning sustainable

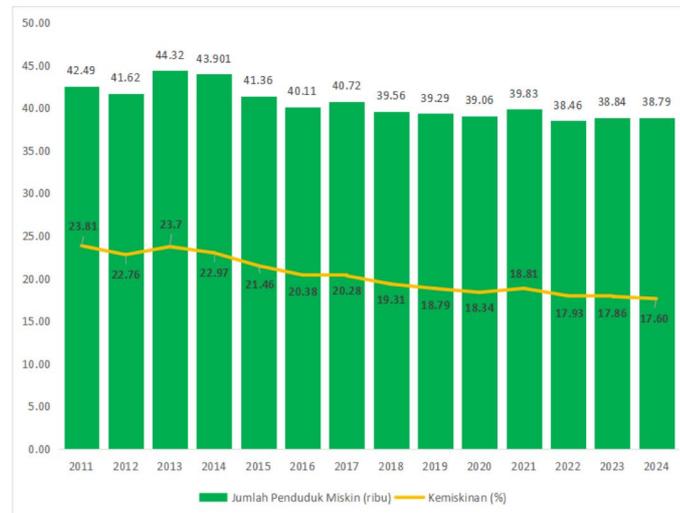
agricultural land protection, and Qanun Aceh No. 3 of 2020 concerning farmer protection and empowerment (Pemerintah Aceh, 2020, 2022a, 2022b). These policies aim to ensure food availability, maintain agricultural sustainability, and improve farmer welfare through government support and institutional strengthening.

At the district level, the West Aceh Regency Government has also demonstrated its commitment to strengthening food security through various policies and programs. The West Aceh Food Agency has developed a Strategic Plan (*Rencana Strategis*, Renstra) in accordance with the Regulation of the Minister of Home Affairs Number 86 of 2017, which includes programs aimed at improving food availability, accessibility, and utilization (Kementerian Dalam Negeri, 2017). In addition, Regent Regulation Number 32 of 2024 outlines various initiatives related to food and livestock security, agricultural development, and community empowerment programs (Pemerintah Aceh Barat, 2024). These policies are intended to support local agricultural productivity and enhance farmer welfare.

Despite the implementation of various food security policies, farmer welfare remains an important issue, particularly in regions where agriculture serves as the primary source of livelihood. Data from the Central Statistics Agency (BPS) indicate that a large proportion of poor households in Indonesia depend on the agricultural sector (Badan Pusat Statistik, 2024). This condition reflects the vulnerability of farmers to economic instability and highlights the importance of effective policy implementation in improving their welfare.

The poverty trend in West Aceh Regency further illustrates the welfare challenges faced by the community. Based on data from the Central Statistics Agency (*Badan Pusat Statistik*, BPS) of West Aceh Regency, the poverty rate has shown a gradual decline over time, although fluctuations still occur.

**Figure 1. Number and Percentage of Poor Population in West Aceh Regency from March 2011 to March 2024**

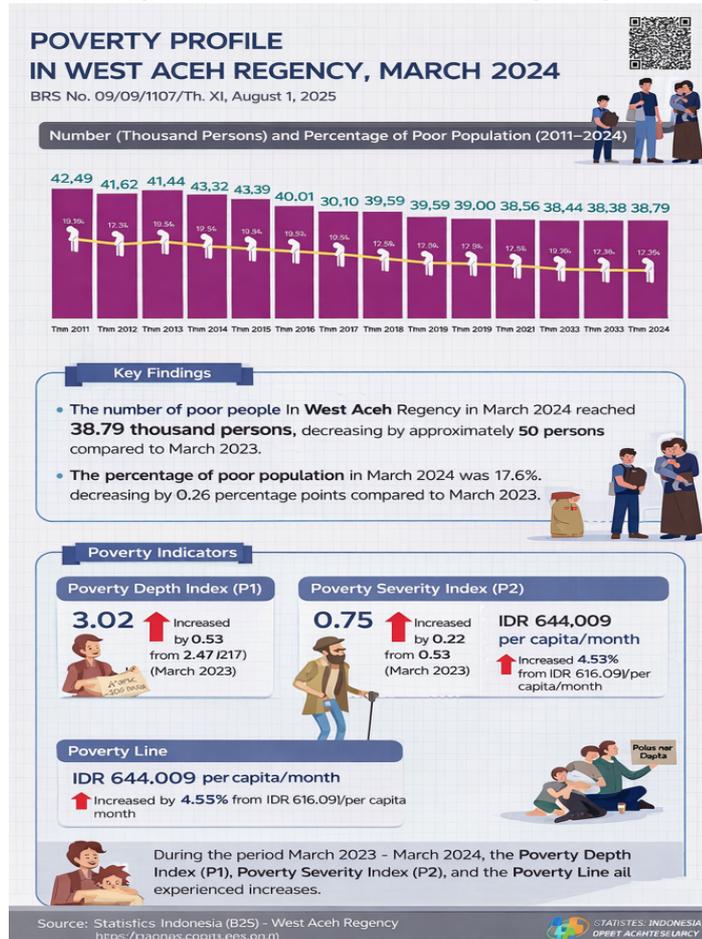


Source: Adapted from BPS West Aceh Regency, 2024

As shown in Figure 1, the poverty rate in West Aceh Regency reached 17.60 percent in March 2024, reflecting a decrease of 0.26 percentage points compared to March 2023. In absolute terms, the number of poor residents was recorded at approximately 38,790 individuals (Badan Pusat Statistik Kabupaten Aceh Barat, 2024). Although this trend indicates gradual improvement, the poverty rate remains relatively high. Considering that a significant portion of the population depends on agriculture for their livelihood, this condition suggests that farmer welfare remains vulnerable and requires continued policy attention and intervention.

Further data also illustrate the latest poverty profile in West Aceh Regency (Badan Pusat Statistik Kabupaten Aceh Barat, 2025), providing a more detailed picture of the community's socioeconomic condition.

**Figure 2. Poverty Profile in West Aceh Regency, March 2024**



Source: Adapted from BPS West Aceh Regency, 2024.

The data presented in Figure 2 show that although there has been a decline in poverty rates, many households remain economically vulnerable and close to the poverty line. This indicates that improvements in poverty indicators do not necessarily reflect significant improvements in farmer welfare. Limited access to resources, agricultural infrastructure, and government support remain challenges that affect farmers' economic conditions.

These conditions raise important questions regarding the effectiveness of food security policies in improving farmer welfare, particularly at the regional level. While various policies and programs have been implemented, their actual impact on improving the welfare of farmers in West Aceh Regency has not been fully understood. Evaluating the effectiveness of these policies is important to

determine whether they have successfully improved farmer welfare or whether there are still gaps in their implementation.

Therefore, this study aims to analyze the impact of food security policies on the welfare of farmers in West Aceh Regency. This study focuses on examining the effectiveness of food security policies through key indicators, including food availability, food access, and food utilization. The findings of this study are expected to provide insights into the effectiveness of food security policy implementation and contribute to the development of more effective strategies to improve farmer welfare and strengthen regional food security.

## **Literature Review**

Food security is widely recognized as a multidimensional concept encompassing food availability, access, utilization, and stability. In the Indonesian context, food security is closely linked to the welfare of farmers as primary food producers. Recent national empirical studies confirm that food security should not be understood solely in terms of aggregate production, but also in relation to farmers' economic capacity and livelihood sustainability. Hanani et al. (2024) demonstrate that the adoption of greenhouse technology significantly improves farmers' productivity and household income, which in turn strengthens household food security (Hanani et al., 2024). Their findings indicate that technological innovation enhances not only production output but also economic resilience at the household level.

Similarly, Nugroho et al. (2025) find that the adoption of biogas technology among farming households contributes positively to household food security by reducing production and energy costs (Nugroho et al., 2025). Lower household expenditures increase disposable income, allowing better allocation toward food consumption and improving overall welfare. These findings reinforce the argument that food security is strongly influenced by economic efficiency and

household resource management, not merely by the volume of agricultural production.

Income stability remains a central determinant of farmer welfare and food security. Enjelia (2025), in a study on coffee farmers, shows that higher household income significantly correlates with improved welfare indicators and more secure food consumption patterns (Enjelia, 2025). However, the study also highlights that dependence on specific commodities exposes farmers to price volatility and market uncertainty. This suggests that production gains alone are insufficient if farmers remain vulnerable to fluctuating output prices and unstable income streams.

Market dynamics further complicate the relationship between production and welfare. Allo et al. (2018) argue that rising food prices generate mixed effects on farmer welfare (Allo et al., 2018). While higher output prices may increase gross revenue, they are often accompanied by rising input costs and distribution inefficiencies. As a result, farmers do not always benefit proportionally from price increases. The study emphasizes that structural market constraints, limited bargaining power, and supply chain inefficiencies reduce the welfare gains from increased production.

Government policy also plays a crucial role in shaping farmer welfare and food security outcomes. Syahputri et al. (2024) find that agricultural subsidies and food security budget allocations significantly influence the Farmers' Terms of Trade (NTP), which serves as an important welfare indicator (Syahputri et al., 2024). Their findings suggest that well-targeted subsidy programs can enhance farmers' purchasing power and economic stability. However, policy effectiveness depends on accurate targeting, proper distribution mechanisms, and consistent implementation at the regional level.

In addition to structural and policy factors, digital access has emerged as a new determinant of farmer welfare. Wardhana et al. (2024) demonstrate that

internet access positively affects farmers' welfare by improving access to price information, expanding marketing networks, and enabling income diversification (Wardhana et al., 2024). Digital connectivity reduces information asymmetry and strengthens farmers' bargaining positions within agricultural value chains, thereby contributing to improved income stability and household food security.

Overall, national literature over the past decade consistently shows that food security and farmer welfare are closely interconnected. These studies collectively emphasize that technological innovation, income stability, market structure, government intervention, and digital access are key determinants linking agricultural production to farmer welfare outcomes. They highlight that improving food security requires not only increasing production but also addressing economic, structural, and institutional constraints that affect farmers' livelihoods. However, most research remains concentrated at the national or provincial level, indicating the need for district-level analysis to better understand how food security policies influence farmer welfare within specific local contexts.

## **Methods**

This study employs a qualitative method with a case study approach, in accordance with Creswell's explanation. Creswell (2016) states that this approach is one of the strategies in qualitative research that allows researchers to conduct an in-depth exploration of a program, event, activity, process, or individual, either singularly or in multiple instances. This case study has certain limitations related to time and the observed activities; therefore, to achieve a comprehensive understanding, the researcher must collect data intensively through various techniques over a specific period (Widhagdha & Ediyono, 2022). This approach was chosen because it is considered the most relevant to the objectives and context of the research being conducted.

The research took place in West Aceh Regency, specifically at the Food Service Office, the Agriculture Service, and related communities. This location was selected because the percentage of farmers in West Aceh Regency is relatively high, especially compared to other sectors in the regional economy.

The data in this study were collected from two sources, namely primary and secondary data. Primary data were obtained directly from the field through methods such as interviews and observations. Meanwhile, secondary data came from indirect sources, such as previous journals, websites, books, and other relevant sources. Additionally, for the selection of informants, a purposive sampling approach was used, which is a sample determination technique deliberately selected based on certain considerations related to the research objectives. The researcher chose informants deemed most qualified to provide in-depth and relevant information related to the research topic. Creswell emphasizes the importance of selecting appropriate informants in qualitative research.

## **Results and Discussion**

This study examines the impact of food security policies on farmer welfare in West Aceh Regency through three key dimensions: food availability, food access, and food utilization. Based on field findings, food security policies in West Aceh Regency demonstrate a generally positive trend at the macro level; however, their effectiveness at the farmer level remains uneven due to structural constraints such as irrigation limitations, infrastructure gaps, and weak market connectivity. These conditions directly and indirectly affect farmer welfare, particularly in terms of income stability and production sustainability.

### **Availability Aspect**

The food availability aspect in West Aceh Regency can be categorized as relatively strong based on the Food Security Index, which recorded a score of

90.06 in 2023. This score indicates that food availability in the region is within the secure category and reflects stable food production capacity at the regional level. The stability of rice production and other food crops such as corn and tubers supports the overall food supply. In addition, the presence of traditional markets across sub-districts and relatively stable distribution channels ensures the availability of food throughout the year.

However, field findings reveal discrepancies between macro-level indicators and farmer-level realities. Interviews with farmers indicate that access to production support, irrigation systems, and agricultural assistance remains limited and unevenly distributed. Many farmers reported experiencing water shortages during dry seasons, indicating that irrigation infrastructure has not been fully optimized. This condition reduces agricultural productivity and increases farmers' vulnerability to production risks.

Furthermore, although agricultural infrastructure such as roads and transportation has improved in some areas, the availability of agricultural machinery, inputs, and technological support remains insufficient for many farmers. While the government has provided assistance such as harvesting machines and plowing equipment, access to these resources is not evenly distributed. This uneven distribution reduces the effectiveness of food security policies in strengthening production capacity at the farmer level.

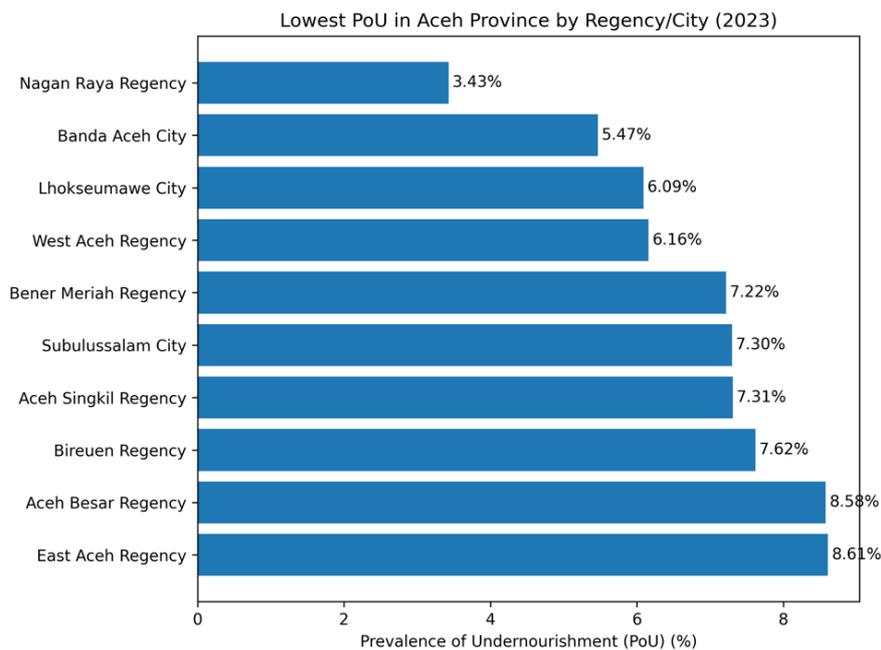
Production stability also remains a challenge. Farmers continue to face risks related to pests, climate variability, and price fluctuations without adequate institutional protection mechanisms. The absence of effective price stabilization policies and pest management support reduces farmer resilience and increases economic uncertainty. In addition, weak market connectivity limits farmers' ability to access broader markets, resulting in lower selling prices and reduced income potential.

These findings indicate that although food availability appears strong at the regional level, structural limitations in infrastructure, production support, and market access reduce the effectiveness of food security policies in improving farmer welfare. This suggests that food availability alone is not sufficient to ensure farmer welfare without adequate institutional and economic support.

**Food Access**

Food access in West Aceh Regency shows gradual improvement, as reflected by the decline in the Prevalence of Undernourishment (PoU), which reached 6.16% in 2023, lower than the national average of 8.53%. This indicates that, overall, the population has relatively adequate access to food. Government programs such as affordable food markets, food assistance, and infrastructure improvements have contributed to strengthening food access at the community level (see Figure 3).

**Figure 3. Prevalence of Undernourishment (PoU)**



Source: Processed by Authors (2025)

However, field findings indicate that physical and economic access to food remains uneven, particularly among farmers in remote areas. Limited road

infrastructure, transportation constraints, and weak market connectivity reduce farmers' ability to distribute their products efficiently. As a result, farmers often depend on local markets with limited demand and lower prices, which directly affects their income and economic welfare.

In addition, limited access to production inputs such as fertilizers, seeds, and irrigation reduces farmers' production efficiency and income potential. Although government programs exist to support agricultural production, their implementation remains uneven, and not all farmers benefit equally. This condition weakens the overall effectiveness of food access policies in improving farmer welfare.

These findings indicate that while food access at the population level has improved, structural constraints in infrastructure and resource access limit the economic benefits of food security policies for farmers. As a result, improvements in food access indicators do not fully translate into improved farmer welfare.

### **Food Utilization**

The utilization of food resources in West Aceh Regency shows positive progress, supported by the region's abundant natural resources and agricultural potential. Farmers and local communities utilize agricultural products for both consumption and economic purposes. Programs encouraging food diversification, home gardening, and local food production have contributed to strengthening food utilization and household food resilience.

Government initiatives such as backyard garden programs, utilization of idle land, and agricultural diversification have helped improve local food utilization. These programs not only support food consumption but also create additional economic opportunities for farmers and rural households. For example, farmer groups have successfully utilized idle land for cultivating high-value commodities

such as red onions, while some communities have developed value-added products from local agricultural resources.

However, despite these positive developments, significant limitations remain in terms of value-added processing and post-harvest management. Most farmers still sell their products in raw form without further processing, resulting in lower economic returns. Limited knowledge, training, and access to processing technology reduce farmers' ability to increase product value and income. This condition limits the potential impact of food utilization policies on improving farmer welfare.

These findings indicate that although food utilization has improved, its contribution to farmer welfare remains limited due to the lack of value-added processing capacity and market integration.

### ***Impact of Food Security Policy on Welfare***

Food security policies in West Aceh Regency have contributed to improving several aspects of farmer welfare, particularly in terms of access to education, agricultural support programs, and food availability. Government assistance programs, infrastructure development, and agricultural support initiatives have helped strengthen food production and household food resilience.

However, the overall impact of food security policies on farmer welfare remains partial and uneven. While food availability and utilization have improved at the regional level, structural constraints in irrigation systems, infrastructure, market access, and production support continue to limit their effectiveness in improving farmer income and economic stability.

Field findings indicate that farmers still face challenges related to price instability, limited production support, and weak market connectivity. These factors reduce farmers' bargaining power and income potential, despite improvements in food security indicators. In addition, unequal access to

government programs and agricultural assistance further contributes to disparities in farmer welfare.

Although some farmers have benefited from government programs, the overall improvement in farmer welfare remains moderate rather than substantial. Food security policies have been effective in maintaining food availability and improving basic food access, but their impact on improving farmer income, economic stability, and long-term welfare remains limited.

These findings suggest that food security policies in West Aceh Regency have not yet fully achieved their intended objective of improving farmer welfare. While progress has been made in strengthening food availability and utilization, greater focus is needed on improving infrastructure, irrigation systems, market access, and institutional support to ensure that food security policies can more effectively improve farmer welfare at the local level.

## **Conclusion**

This study demonstrates that food security policies in West Aceh Regency have contributed positively to maintaining regional food stability. However, their impact on improving farmer welfare remains limited and uneven. While policy interventions have strengthened food availability, access, and utilization at the regional level, these achievements have not fully translated into sustained improvements in farmers' income, production security, or economic resilience. The findings indicate that food security outcomes measured through macro-level indicators do not automatically generate welfare gains at the producer level, revealing a gap between policy performance and livelihood transformation among farmers.

The study therefore highlights that the effectiveness of food security policies is strongly shaped by structural and institutional conditions, including unequal access to infrastructure and markets, limited value-added opportunities, and weak

inter-agency coordination in policy implementation. These constraints reduce farmers' capacity to benefit from food security programs beyond subsistence-level stability. Consequently, improving farmer welfare requires a shift from production-oriented food security approaches toward integrated rural development strategies that strengthen value chains, institutional coordination, and farmer capabilities. By demonstrating how food security policies may secure regional food systems without substantially improving farmer welfare, this study contributes to ongoing debates on inclusive food security governance and underscores the need to reposition farmer welfare as a central outcome of food security policy design.

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