

Women Farmers' Participation in Family Food Security Development: A Narrative Study in Rural Sambas Regency

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Abstract

This study aims to examine the participation of women farmers in the development of family food security in rural Sambas District. In the context of an agrarian society, women play an important role not only as actors of agricultural production but also as the main managers of food at the household level. This research used a qualitative approach with a narrative study method, which was conducted through in-depth interviews, observation, and documentation of women farmers in several selected villages. The results of the study show that women actively manage their yards, produce processed foods, and regulate family consumption as adaptive strategies to maintain food security. Women's participation is driven by internal factors such as economic needs and local knowledge, as well as external factors such as support from women's farmer groups and empowerment programs from the government. However, their involvement still faces challenges such as limited access to land, training, and male dominance in community decision-making. Women's narratives reflect resilience, innovation, and collective spirit rooted in local wisdom in addressing food and household economic challenges. This study emphasizes that strengthening women's roles in local food systems is a crucial strategy for building inclusive and sustainable food security. Therefore, more gender-responsive policies, support for women's groups, and recognition of their tangible contributions to rural development are needed.

Keywords: *Women farmers, food security, narrative, empowerment, rural areas, Sambas Regency.*

INTRODUCTION

Food security is one of the main indicators used to measure the quality of life of communities and the sustainability of economic development, especially in rural areas. Household food security, as the smallest unit of national food security, plays a strategic role in ensuring the availability, affordability, and sustainable use of food (Doss & Raney, 2011). In the context of Indonesia, which has an agrarian demographic structure, the role of farming families is extremely crucial. One important actor that is often overlooked is female farmers.

Women play a dual role in local food systems: as agricultural producers and as food managers in the household. They are not only involved in activities such as planting, tending, harvesting, and processing agricultural products, but are also responsible for ensuring the daily availability of food for family members. Research by (Meinzen-Dick et al., 2011) shows that women contribute more than 40% of the agricultural workforce in developing countries, including Indonesia. However, this contribution is often not formally recognized due to limited access to land, technology, training, and economic decision-making.

In Sambas Regency, West Kalimantan, where the majority of the population works in the agricultural sector, women's contribution to agriculture is very significant. Based on data from the Sambas Regency BPS (2023), around 56% of households in rural areas depend on the agricultural sector for their livelihood. In the 2024 Sambas Regency in Figures publication, the proportion of households relying on the agricultural sector for their livelihood in rural areas has slightly decreased compared to the previous year.

However, the agricultural sector remains the primary source of livelihood for the majority of rural residents in Sambas Regency. Women's roles in this sector are highly significant, spanning production, processing, and food distribution at the household level. However, their contributions are often inadequately documented and have not received the attention they deserve in regional development policies. Of this number, women play an active role in managing yard plots, conducting small-scale farming, and producing locally-based processed foods. However, women's participation in agricultural development has not been fully accommodated in local policies. There are still disparities in access to business capital, agricultural training, and decision-making at the community level.

This situation is further exacerbated by global challenges such as the climate crisis and food price instability, which weaken the purchasing power and productivity of farming households. In such circumstances, female farmers face significant challenges in maintaining household food security, both in terms of quantity and quality of consumption. However, according to a study (Njuki et al., 2023), empowering women in the agricultural sector has proven effective in enhancing food

diversification, family nutritional consumption patterns, and household economic resilience.

Unfortunately, studies that specifically address the narratives, experiences, and roles of women farmers in maintaining family food security in rural areas of Indonesia, particularly in Sambas Regency, are still very limited. Qualitative and narrative research is important to explore in greater depth how women adapt, innovate, and contribute in the face of local food security pressures.

By understanding the experiences and strategies of women farmers in context, the results of this study are expected to contribute to the formulation of more inclusive and gender-responsive regional development policies, as well as to encourage the strengthening of women's capacity to build a resilient and sustainable food system.

Based on this background, the issues to be examined in this study are related to the forms of participation of women farmers in agricultural activities and family food management in rural areas of Sambas Regency, the factors that encourage and hinder women's participation in building family food security, and the narratives and experiences of women farmers in supporting family food security in rural areas.

Therefore, this study aims to: 1) Identify the forms of participation of women farmers in agricultural activities and household food management in Sambas Regency; 2) Analyze the factors that encourage and hinder women's involvement in food security development; and 3) Explore the narratives and experiences of women farmers in their contribution to family food security in rural areas as part of regional development.

METHODOLOGY

This study uses a qualitative approach with a narrative study method. According to Bogdan and Taylor in (Bado, 2022), qualitative research is a research procedure that can produce descriptive data in the form of speech, writing, and behavior of the people being observed. Through this qualitative research, it is possible to understand reality through an inductive thinking process.

Furthermore, according to Connelly & Clandinin in (Bado, 2022), narrative research is a narrative report that describes the sequence of events in detail. In narrative research design, researchers describe individuals' lives, collect stories about people's lives, and write narratives of individual experiences. The research location was purposively selected in several villages in Sambas Regency, where the majority of the population works as farmers. Data collection was carried out through in-depth interviews, field observations, and documentation studies. The primary informants in this study were female farmers actively involved in agricultural activities and family food management.

Data analysis was conducted thematically, beginning with the transcription of interview results, data grouping, and the identification and drawing of conclusions based on themes that emerged from the informants' narratives. To ensure data validity, source triangulation and member checking were conducted with informants to obtain the validity and consistency of information.

In addition, this study also uses literature review to enrich the discussion by comparing the results of previous studies with the field findings in this study, where according to (Yusuf & Khasanah, 2019) literature review or bibliographic review is generally a discussion or reading material related to a topic or findings in a study. In total, 12 documents were used, consisting of scientific articles accessed from Google Scholar, as well as supporting data from the BPS and the government.

LITERATURE REVIEW

The Role of Women in Food Security

Women play an important role in the food system, both as producers and managers of family food. (Doss & Raney, 2011) emphasize that women play an important role in ensuring the availability, accessibility, and utilization of food at the household level, especially in agrarian countries such as Indonesia. They are involved in the entire agricultural process, from planting to processing crops for family consumption.

However, (Meinzen-Dick et al., 2011) notes that although women account for more than 40% of the agricultural workforce in developing countries, their contributions are often not formally recognized due to limited access to resources such as land, training, technology, and decision-making. This poses a major challenge to achieving inclusive food security.

Food Security in a Local Context

Household food security encompasses three main aspects: food availability, food access, and food absorption (Veniwati, 2017). Programs such as KRPL (Kawasan Rumah Pangan Lestari or Sustainable Food Households) have a positive impact on food security by empowering women to produce food independently at home, thereby increasing food availability and access.

Empowerment of Women Farmers Groups (KWT)

Research by (Pratama et al., 2022) in Gunungkidul Regency shows that the active participation of members of the Women Farmers Group (KWT) in the Sustainable Food Garden (P2L) program has a significant effect on improving household food security. However, this participation is more dominant in the form of attendance than in the contribution of ideas and capital.

Another study by (Togatorop et al., 2024) in the Lumbung Mataraman program shows that women's empowerment through mutual cooperation in the utilization of yard land has increased women's capacity and awareness of the importance of family food independence.

Meanwhile, (Aulia et al., 2021) in Semarang showed that women's empowerment through activities such as shrimp satay businesses, vegetable cultivation, and waste management also encouraged food self-sufficiency and female entrepreneurship.

Empowerment and Sustainable Food Security

A recent study by (Njuki et al., 2023) states that women's empowerment contributes significantly to creating a resilient food system. Increased participation of women in food production, management, and distribution has an impact on food diversification, increased nutritional consumption, and strengthening of household economies. This is relevant in the context of Sambas Regency, whose community is highly dependent on the agricultural sector.

In general, the relationship between women's empowerment and its connection to household food security, as presented in several previous studies, can be seen in Table 1 below.

Table 1. List of Previous Research Related to Women's Empowerment and Household Food Security

No.	Author	Year	Location	Research Topic	Result
1.	Ivan Veniawati	2017	Tertek Village, Pare District, Kediri Regency.	The Role of Women towards Household Food Security through the Sustainable Food Home Area Program (KRPL)	There is a positive relationship between women's roles in KRPL and household food security, in the form of increased women's knowledge of cultivation techniques and nutritious food consumption, increased production that correlates with increased household food availability and access, and increased understanding of health, safety, and household

					consumption diversity principles.
2.	Dian Pratama, Roso Witjaksono, dan Alia Bihrajihant Raya	2022	Gunungkidul Regency, DI Yogyakarta	Participation of Women Farmers Group (KWT) Members in Sustainable Food Garden Activities.	The participation of KWT members in the Sustainable Food Garden program has an impact on improving household food security through increased productivity, availability, and access to food for households, in the form of a supply of fresh vegetables for households.
3.	Yesi Grace Togatorop, Budi Widayanto, dan Wulandari Dwi Etika Rini	2024	Ngalian Widodomartani Village, Ngemplak, Sleman	Empowering the Mekar Women Farmers Group Through the Lumbung Mataraman Program.	Empowerment is achieved through the collective use of land to increase income, become food-independent KWTs, and improve the economy, with the stages of empowerment consisting of awareness-raising and capacity building.
4.	Saipullah Hasan, Bifa Aulia, Taufiq Yudha Kusuma, Nafisah Fidda Roini, dan Tika Setyani	2021	Padaan Village, Pabelan District, Semarang Regency	Empowering Women Farmers' Groups in Food Security	Women can independently meet their household food needs and develop their productivity in food entrepreneurship.
5.	Triana Pujilestari, dan Tri Haryanto.	2022	West Nusa Tenggara Province.	The Role of Women in Improving Household Food Security	Household food security levels are not influenced by the mother's employment status or whether the household lives in a rural or urban area. However, the mother's level of

					education plays an important role in determining household food security levels.
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DISCUSSION

1. Women farmers' participation in agricultural activities and household food management

Women farmers in Sambas Regency not only play a supporting role to their husbands in agricultural activities, but also as key players in various food production and management activities for their families. Based on interview results, the majority of women manage their home gardens to grow vegetables such as water spinach, chili peppers, tomatoes, and sweet potatoes. Additionally, they are involved in post-harvest activities such as storing harvested crops, processing food ingredients into ready-to-eat products (e.g., chips, dried meat, and dodol), and distributing processed goods to local markets or neighboring shops.

This activity shows that women are not only involved in domestic work, but are also active in the informal economy based on household agriculture. From the perspective of feminist political ecology theory, this participation shows how women play an important role in the local management of natural resources, especially in the context of adaptation to climate change and food crises. Women utilize local knowledge and ancestral experience to manage their home gardens as spaces for sustainable food production.

This contribution is often not formally recorded in agricultural statistics because women are rarely registered as landowners or heads of farming households. However, their participation is very important in maintaining the daily food stability of their families. This highlights a gender gap in the recognition of women's contributions to the agricultural sector, as pointed out by Meinzen-Dick et al. (2011), who state that women's involvement is often overlooked because the formal agricultural system is still dominated by patriarchal perceptions.

Furthermore, women's participation is also evident in managing family consumption patterns. They play a major role in determining the types of food consumed, healthy eating patterns, and family nutrition management. This is in line with the findings of Doss & Raney (2011) that women's involvement in household food production and management directly affects food diversification and consumption quality. This means that the participation of women farmers plays a strategic role in achieving food security in terms of availability, access, and utilization.

2. Factors that encourage and hinder women's involvement in food security development

There are various factors that encourage women to actively participate in maintaining their families' food security. One of these is economic pressure, whereby women must help support their families' income, especially in times of economic uncertainty. In situations where commodity prices fluctuate and their husbands' income is uncertain, women take on the role of household food producers by utilizing their yards and available local resources. Additionally, collective awareness within the community also serves as a driving force. In some cases, solidarity among women in the form of farming groups or informal cooperatives further strengthens their motivation to remain actively involved in household agricultural activities.

Another supporting factor is the existence of government programs such as KRPL (Sustainable Food Households) and P2L (Sustainable Food Gardens), which encourage the optimization of backyard land for meeting family food needs. Through training and seed assistance, women gain access to new knowledge and feel that their contributions are valued. These findings are consistent with studies by Pratama et al. (2022) and Togatorop et al. (2024), which state that empowering women through backyard farming activities has proven effective in increasing production capacity and strengthening family food security.

However, women's involvement in food security development also faces various challenges. One of the main obstacles is limited access to productive resources such as land, business capital, and agricultural technology. In addition, the double burden of work causes women to experience time poverty, as explained by Pérez and Santamaría (2025), that limited time can reduce women's well-being when public and domestic roles are not balanced with structural support. In many cases, women do not have rights to land ownership, so they depend on their husbands or extended families to determine the types of crops and harvests to be managed. This dependence limits women's ability to make decisions related to food production.

In addition, double workload is also a significant obstacle. Women not only work in fields or gardens, but also take care of the household, children, and community social activities. This results in limited time and energy that they can allocate to other productive activities. The Time Poverty Theory perspective (Blackden & Wodon, 2006) explains that women in rural areas often experience time poverty due to an imbalance between domestic and public workloads. This is a structural challenge that must be addressed by gender-responsive public policies.

3. Narratives and experiences of women farmers in contributing to family food security in rural areas

The experiences of women farmers in maintaining family food security reflect a spirit of resilience and innovation in the face of limitations. The narratives emerging from the interviews show that many women are able to survive economic downturns through adaptation strategies such as crop diversification, processing harvests into marketable products, and leveraging social networks to market their products. One informant described how she produces banana chips from her own garden and sells them at the village market every week as a strategy to supplement her family's income.

This narrative shows how women not only survive in difficult situations, but also become local innovators in the household food system. With limited capital and land, they are able to create efficient and sustainable home-based food production models. This approach aligns with the principles of the Sustainable Livelihood Framework, which emphasizes the importance of mobilizing social assets and local knowledge to build resilience (Gupta, 2025). Additionally, the survival strategies employed by women demonstrate increased agency, as discussed by Conteh and Ibrahim (2024) in the context of women's cooperatives in West Africa.

In addition to economic aspects, spiritual experiences and local wisdom are also part of the narrative of women farmers. Many of them interpret farming as a form of worship and an expression of gratitude for the blessings of nature. This strengthens their internal motivation to continue farming even though the results are not always commensurate. This perspective reflects the eco-feminist approach, which views women's connection to nature as the foundation of their philosophy of life and sustainable practices.

Equally important, women's narratives also express hopes for greater recognition and support from local governments. They want access to training, revolving capital, and broader involvement in decision-making forums related to agriculture. These hopes are important considerations in the formulation of local policies to ensure they are more inclusive and responsive to the needs and experiences of women farmers at the village community level.

CONCLUSIONS

This study shows that female farmers in rural Sambas Regency play an important and strategic role in maintaining family food security. They are actively involved in various agricultural activities, ranging from managing their own land, cultivating crops, to processing and distributing local food products. These activities

not only meet household consumption needs, but also contribute to increasing family income through small food-based economic activities.

Women's participation in the agricultural sector is driven by internal factors such as a spirit of independence, economic needs, and local knowledge inheritance. Externally, government programs and support from women's farming groups also encourage their active involvement. However, challenges remain in the form of limited access to land, capital, training, and low participation of women in decision-making at the community level.

The narratives and experiences of women farmers demonstrate their resilience and high adaptability in the face of limited resources and economic uncertainty. By utilizing their yards, social networks, and local wisdom, they prove that women have great potential as agents of sustainable food development. Therefore, recognition of the contributions of women farmers and sustainable empowerment efforts are crucial in strengthening food security at the household and community levels. These findings provide an important basis for more inclusive, gender-responsive, and locally-based regional policy-making.

RECOMMENDATIONS

Based on the findings and analysis of women farmers' participation in building family food security in rural areas, the recommendation that can be made is the need for local governments and related institutions to expand women's access to agricultural resources. This access includes business capital, technical training, and appropriate technology to encourage increased productivity among women in agricultural activities and food processing. Furthermore, rural development policies should integrate a gender perspective by providing equal opportunities for women in decision-making, particularly in village deliberative forums and agriculture-based development planning.

In addition, strengthening Women Farmers Groups (KWT) as centers of local learning and innovation is also a strategic step that needs to be actively supported by the government through assistance, institutional strengthening, and training based on the real needs of rural women. Higher education institutions and local researchers are encouraged to conduct participatory research to explore the local knowledge and life experiences of women farmers, so that the results of such research can enrich development approaches that are more contextual and humanistic. Finally, an empowerment approach rooted in local wisdom values must be prioritized, given its crucial role in maintaining collective spirit, sustaining agricultural practices, and preserving culture amid the tide of modernization.

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