

Research Article



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From Farm to Family: Family Farms' Contribution to Food Security in Asia-Pacific

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Global uncertainties in the agrifood system pose significant challenges to food security. In this context, family farming (FF) emerges as a critical player in ensuring food security, particularly in the Asia and the Pacific regions. Characterised by family control of land and labour, FF encompasses a way of life, agricultural diversity, historical significance, and cultural traditions. This paper explores the role of FF in ensuring food security in Asia and the Pacific. It also examines the key characteristics of FF, its contributions to food security and the challenges it faces.

INTRODUCTION

Food matters (van der Pleog, 2014, 999). It mobilises individuals and frequently triggers unforeseen transformations in society. Food is a subject of dispute and is the conflict target known as 'food wars' (Lang and Heasman, 2015). Ensuring food security for all individuals is a basic entitlement of every human being. However, attaining this goal continues to be a multifaceted difficulty (Icheria, 2019). At the same time, meeting the global population's food demands sustainably is a challenge (Food and Agricultural Organisation of the United Nations [FAO], IFAD & WFP, 2015). According to projections, 9.7 billion individuals will be living in the world by 2050 (Keating & Carberry, 2010; Keating et al., 2014). To meet the increasing demand for food, there is a need to increase 70% food production (Farmers' Weekly, 2022; Keating & Carberry, 2010; Keating et al., 2014). Ensuring a stable food supply for the world's growing population necessitates exploring solutions that enhance agricultural production. It is imperative to ensure the provision of food for everyone while simultaneously safeguarding the environment and human well-being from the depletion of natural resources (Cole et al., 2018). While Asia and the Pacific are major agricultural producers, around 1.1 billion individuals don't have access to nutritious diets owing to poverty and rising food prices (Asian Development Bank [ADB], 2021).

Over the past 50 years, the definition of food security has undergone changes and advancements. Munthali (2017) asserts that the concept of the four pillars-availability, access, utilisation, and stability-represents a significant advancement in our understanding of food security. The policy decisions have been significantly impacted by these pillars (Murray et al., 2023). Clapp et al. (2021) added the concept of agency and sustainability as two additional pillars. Agency, defined as the ability of individuals and groups to have control over their situations and contribute to decision-making processes, is widely recognised as a crucial factor in addressing the growing inequalities within food systems, including power imbalances among different actors involved in those systems (Clapp et al., 2021; McDonald, 2010).

Family Farming (FF) becomes significant in this context. The family farms or family farmers have the potential to serve as the agency to ensure food security. Worldwide interest in the subject of family farming has been growing. The United Nations (UN) declared 2019 – 2028 as the United Nations Decade of Family Farming (UNDDFF) (Shrestha et al., 2021), acknowledging FF's value as a primary method of food and agricultural production in both developed and developing nations. FAO (2014) reported that family farmers contribute more than 80% of global food production in terms of value and account for over 90% of all farms worldwide (Lucantoni, 2020).

Despite being a common term, “family farm” lacks a single, globally agreed-upon definition (Hill, 1993; Eastwood et al., 2010). Most definitions typically share two key features: 1) Family Land Control: this includes ownership of the land by the family or the inheritance of land rights across generations. 2) Family Labor: the farm relies heavily on the labour of family members (Errington & Gasson, 1994). In this context, ownership encompasses the authority to make decisions and the physical control of farm assets such as land, housing, equipment, and livestock. This enables the farm to be transferred to future generations.

FF is a system in which the production of food is mainly controlled and carried out by a family. In Asia and the Pacific context, smallholders or marginal farmers are considered family farmers (FAO, 2012; Sharma, 2014; Thapa & Gaiha, 2014). It plays a crucial role in ensuring food security, especially in Asia and the Pacific regions, where it is the most common type of agricultural production (FAO, n.d.a). Quisumbing et al. (1996) state that food security is largely reliant on sustainable food production. Food security is a crucial function of FF, as it ensures that households have an adequate food supply and strengthens the ability of food systems to withstand climate change impacts (Chao, 2024). FF enhances food and nutritional access by utilising the resources of families, such as their land, labour, and capital, and by providing a link to technology and markets. Principles of sustainability are intricately linked to every aspect of family farming. Small farms have a substantial impact on family self-sufficiency, food supply, and local commerce, constituting more than 80% of rural areas (Bieleman, 2010; van der Pleog, 2014). Family farms have a significant impact on promoting local development within the small farm sector. They achieve this by ensuring nutritious food, soil and water conservation, and protecting biodiversity. This has been supported by studies conducted by Chao (2024), Nepomoceno & Carniatto (2023); Schneider & Niederle (2016). Family farming is acknowledged for its multifaceted nature, encompassing a way of life, agricultural diversity, historical significance, and cultural traditions (Chao, 2024; Nepomoceno & Carniatto, 2023).

FAMILY FARMING IN ASIA-PACIFIC

Family farming has been a cornerstone of both production and cultural tradition throughout history in Asia

and the Pacific. This region holds the most family farms globally. The practice of rice farming and irrigation-intensive agriculture thrived because it relied on small, tight-knit units like families or villages as the basic production groups (Jingzhong, 2014). Family farms are particularly well-suited for densely populated areas with limited agricultural resources.

Unlike large-scale commercial farms focused on profit and specialisation, family farms prioritise meeting the diverse needs of the household. This means producing enough food for the family, ensuring nutrition, acquiring clothing, and generating some cash income. To achieve this, they focus on being efficient by utilising various resources within the farm (scope economy) rather than relying solely on large-scale production (scale economy). This approach often makes them more productive than larger monoculture farms.

The lives of family farmers are deeply intertwined with the many roles played by rural households. However, the crucial contribution of family farms in non-commercial household production is often underestimated by national economies (Jingzhong, 2014).

CONTRIBUTIONS OF FAMILY FARMING TO FOOD SECURITY

Scholars suggest that family farms in Asia and the Pacific hold immense potential to boost agricultural productivity and ensure long-term food security (Haque, 2014). Crop diversification guarantees the presence of food for families engaged in farming and also facilitates food exchange (Georgeou et al., 2022; van Zonneveld et al., 2020). Family farms play a particularly critical role in ensuring food security, especially in remote areas or regions with limited access to markets (Losch & Fréguin-Gresh, 2013; van Vliet et al., 2015). Studies across various countries highlight the family farms’ undeniable contribution to household food security (Galhena, Freed & Maredia, 2013; Mitchell & Hanstad, 2004). FF improve food security in several ways. Unlike urban households solely reliant on external food sources, families with farms have a built-in buffer against fluctuations in food prices or disruptions in supply chains (Bucagu et al., 2014; Jayne et al., 2010). By growing their crops and raising livestock, these families can secure a reliable source of nutritious food (Bezner Kerr et al., 2021), regardless of external market conditions. This is especially important for staple crops like

rice, vegetables and protein sources like eggs or poultry, which form the foundation of a healthy diet (Asfaw & Woldu, 1997; Galhena, Freed & Maredia, 2013). FF provides households with easy access to a variety of fresh, nutritious foods daily (Marsh, 1998; Roothaert et al., 2020). Studies have shown that families with farms obtain a significant portion of their vegetables, fruits, tubers, and yams directly from their production (Galhena et al., 2013). Beyond simply increasing caloric intake, family farms play a crucial role in supplementing staple-based diets with essential protein sources, vitamins, and minerals (FAO, n.d.c). This contributes to a more enriched and balanced diet for the entire family, particularly for children and mothers during critical growth stages (Better Health Channel, 2012; Emmett & Jones, 2015; Haines et al., 2019). Additionally, family farms often cultivate spices and herbs that enhance flavours, serve as teas, and add variety to meals (FAO, 2011). National programs promoting family farms, like those implemented in Bangladesh to increase vitamin A-rich food availability, can have a significant impact on public health. In essence, home gardens empower families to take control of their food security by providing a readily available and nutritious source of sustenance (Bushamuka et al., 2005).

In addition, family farms frequently engage in crop and livestock diversification. This implies that they engage in the cultivation of diverse crops and the rearing of various species of animals. A farm with a variety of crops produces a broader selection of food items, resulting in a diet that is more nourishing and well-rounded for the family (Danso-Abbeam et al., 2021; Hazell, 2005; Collier & Dercon, 2014; Losch & Fréguin-Gresh, 2013; van Vliet et al., 2015). This decreases dependence on a solitary crop, guaranteeing a broader assortment of vitamins and minerals are ingested (Olson et al., 2021). Diversification serves as a safeguard against unforeseen weather events or pest infestations (FAO, n.d.b). In the event of a crop failure caused by drought or disease, the family can still depend on the yield from other crops or livestock. This mitigates the potential for food insecurity resulting from unforeseen circumstances (Galhena et al., 2013; Mitchell & Hanstad, 2004). Family farms possess inherent resilience as a result of the adaptable nature of labour provided by family members (Collier & Dercon, 2014; FAO, n.d.c; Hazell et al., 2010; Toulmin & Guèye, 2005). Family members can modify their work schedules and distribution of resources

in response to shifting needs and environmental circumstances (Schneider et al., 2016). Farmers can modify their planting and harvesting schedules according to weather patterns, or prioritise the cultivation of crops that are more resistant to drought in preparation for periods of low rainfall. Their resourcefulness enables them to efficiently utilise resources and adapt to the challenges presented by climate change and economic fluctuations. Family farms in Asia and the Pacific play a crucial role in ensuring food security, not only by providing food for direct consumption but also by generating income. Excess agricultural products can be sold at nearby markets, thereby giving families extra money. This income can be utilised to acquire a variety of food items that individuals may not have the ability to cultivate on their own, thereby enhancing their diets and guaranteeing a broader assortment of vital nutrients (Jingzhong, 2014). Family farms serve a dual role, functioning as a provider of food and a generator of income, making a substantial contribution to ensuring food security within households in the region.

CHALLENGES FACED BY FAMILY FARMS

Diversification is a key strategy for small farms, like family farms (FFs), to manage risk and ensure production continues even in challenging times. This is particularly important in Asia and the Pacific, where many FFs operate (Jingzhong, 2014). The biodiversity inherent in FF systems and the traditional, ecologically sound practices they often employ are especially valuable in this region. These factors contribute significantly to FF resilience in the face of limited agricultural resources and the increasing threat of climate-related disasters (Jingzhong, 2014).

Despite their significant contributions, family farms in Asia and the Pacific face a multitude of challenges that threaten their sustainability. Land tenure insecurity, with many families lacking secure ownership or relying on short-term leases, discourages long-term investments in improvements and productivity enhancements (ADB, 1999). Limited access to crucial resources like credit, technology (Shrestha et al., 2021), and extension services further constrains their growth potential (Balana & Oyeyemi, 2022). Climate change poses a significant threat with unpredictable weather patterns disrupting production cycles, increasing crop failures, and raising vulnerability to extreme events. Market volatility, with challenges in negotiating fair prices and competition from large-scale

farms, adds to the financial strain on family farms (Duku et al., 2018; FAO, 2015). Addressing these challenges through targeted policies, improved resource access, and climate change adaptation support systems is crucial to ensure the continued contribution of family farming to food security in the region.

EMPOWERING FAMILY FARMS FOR FOOD SECURITY

To unlock the full potential of family farms in ensuring food security within Asia and the Pacific, a multi-pronged approach is needed (ADB, 2021). Policy interventions promoting secure land tenure rights through long-term leases or ownership programs are crucial for encouraging long-term investments in land improvements, sustainable practices, and productivity enhancements (Lambin et al., 2014; Holden & Ghebru, 2016). Investments in rural infrastructure development are equally important, improving access to markets, transportation networks, and storage facilities (Wu et al., 2019). This reduces post-harvest losses, facilitates efficient product movement, and allows family farms to connect more effectively with consumers, thus increasing profitability. Furthermore, promoting access to affordable credit, technology, and extension services empowers family farmers to embrace change (UN Trade & Development, 2023). Affordable credit enables them to invest in essential equipment, seeds, fertilisers, and irrigation systems, leading to increased yields. Technology adoption, through access to tools like precision agriculture or advanced storage solutions, can further optimise resource utilisation and minimise waste. Extension services play a vital role in knowledge dissemination, providing training on sustainable practices, pest management techniques, and market trends (Röling & Pretty, n.d.). Finally, research and development efforts focused on climate-resilient crop varieties and farming practices equip family farms to adapt to changing weather patterns, mitigate risks associated with droughts or floods, and ensure long-term farm sustainability (Chao, 2024). By addressing these critical areas, policymakers and stakeholders can empower family farms to thrive, contributing significantly to a more secure and sustainable food system for future generations in Asia and the Pacific.

CONCLUSION

Family farming forms the backbone of food security in Asia and the Pacific, nourishing millions with a steady

supply of nutritious food. Their significance extends far beyond the dinner plate. These farms promote environmental sustainability through practices that conserve natural resources and foster biodiversity. They contribute to local economic development by generating income through market sales and creating employment opportunities within rural communities. Furthermore, family farms act as custodians of cultural traditions, preserving time-tested agricultural practices and knowledge passed down through generations. By implementing targeted policies that address challenges like land tenure insecurity, limited access to resources, and climate change, policymakers and stakeholders can empower family farms to thrive. Investing in rural infrastructure, and promoting access to credit, technology, and extension services will unlock their full potential for innovation and productivity. Further research focused on developing climate-resilient varieties and sustainable farming practices is crucial to equip them for the challenges of the future. Ultimately, by supporting family farms, we can cultivate a more secure, sustainable, and culturally rich food system for generations to come in Asia and the Pacific.

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