SESSION 4: CASE STUDY 4

Empowered or just a metric index? Women in Indonesia's dairy households

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Abstract

Approximately 99% of Indonesian dairy farmers reside on Java Island, where small-scale farms (typically managing fewer than four cows and selling through local cooperatives) dominate dairy production. Despite their size, these farms play a vital role in sustaining rural economies and social structures. Women in dairy households contribute significantly to the dairy labour force, including feeding, watering, milking, managing manure, maintaining animal health, processing, and selling dairy products for income.

Drawing on experiences from the Women's Discussion Group initiatives under the IndoDairy (ACIAR-funded) and 1000 Srikandi (ADB-funded) projects, this case study illustrates how gender-sensitive technologies (i.e. mastitis testing using detergent or 'surf' test) and gender-inclusive extension services (i.e. hands-on training for women) enhance household resilience and foster food system sustainability. Analysis using a modified version of IFPRI's Abbreviated Women's Empowerment in Agriculture Index (A-WEAI) reveals that women in these households are, on average, as empowered as men. The key drivers of this parity include shared responsibilities in farm management and asset ownership, control over income, and active participation in informal groups, though interestingly, not in dairy-related groups (e.g. cooperatives).

A deeper examination of the A-WEAI domains, however, reveals persistent challenges in access to credit. Additionally, women's participation in dairy cooperatives remains limited due to structural and cultural barriers, restricting involvement in decision-making and hindering access to key services and information. While high-level metrics (like A-WEAI) provide a useful tool to measure progress over time, this case study illustrates the need for nuance in the local context as we strive for climate-resilient and inclusive food systems.

Introduction

Good afternoon. My name is Vyta, and I am honoured to share my experience working with smallholders and women dairy farmers in Indonesia through ACIAR and ADB-funded projects, as well as findings from my thesis research on women's empowerment in agriculture.

The Indonesian dairy sector has enormous potential, but it faces challenges in productivity, self-sufficiency, and gender equity. Through my work, I have seen both the promise of innovation and the persistent barriers women farmers face.

The Indonesian Dairy Sector

Indonesia is one of the largest dairy producers in Southeast Asia, alongside Thailand and Vietnam (Priyanti & Soedjana, 2016). Four provinces, particularly East Java, dominate production (Figure 1). Yet almost all dairy farms are smallholder operations, typically with fewer than four cows per household (Akzar et al., 2023, 2024).

Farmers usually sell fresh milk to cooperatives (Resti et al., 2017; Wijers, 2019), but domestic production only meets about 20% of demand. The remaining 80% must be imported, showing just how much room there is to grow the sector (DLAH, 2024).

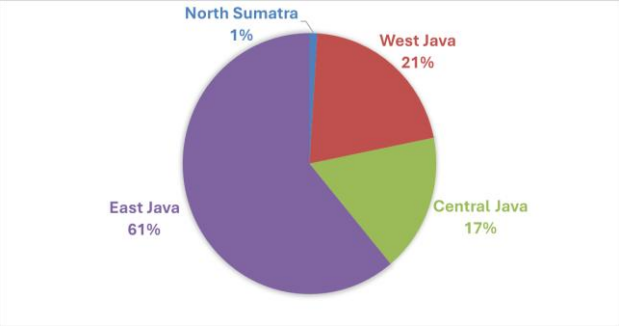

Figure 1. Four leading dairy producers in Indonesia (Statistics Indonesia, 2024)

Lessons from the Indo Dairy Projects

I was involved in two key projects: Indo Dairy Phase 1 (ACIAR funded) and 1000 Srikandi (ADB funded), which together worked with hundreds of farmers, including women farmers in West Java Province. These projects used participatory approaches to test new extension methods:

- **Discussion groups**: monthly farmer meetings, some mixed and one exclusively for women, regular visits and monitoring from the Project's field officer
- **Focus farms (adopted the same approach by Dairy Australia)**: demand-driven training and technology demonstration at the farmers' farm. More information about Focus Farms IndoDairy, please read Hanifah et al. (2025).
- **Gender-sensitive technologies**: such as simple tests for mastitis, record keeping for farm businesses, and milking hygiene practices.

Although the projects were not designed specifically for women, female participation was surprisingly high at around **30%** (Hetherington et al., 2023). The women's groups proved particularly effective in building confidence, skills, and peer networks.

We also partnered with a private dairy company and local dairy cooperatives to deliver hands-on training for more than 1,000 women farmers across six districts. Training covered best practices in nutrition, animal health, reproduction, milk quality, and financial literacy.

From these experiences, I learned that inclusive extension services deliver three key outcomes:

1. Greater access for women to resources and knowledge.
2. More equitable decision-making within households.
3. Stronger resilience and productivity at farm level.

Measuring Women's Empowerment

Beyond project implementation, I wanted to understand how women's empowerment could be measured more systematically. For my thesis, I applied the Abbreviated Women's Empowerment

in Agriculture Index (A-WEAI) to IndoDairy project data.
This index looks across five domains: production, resources, income, leadership, and time (Malapit et al., 2017). We surveyed 435 men and 435 women separately to ensure authentic responses. Surprisingly, the results suggested that women scored as empowered as men overall, with higher scores in income control, particularly income from milk marketing (Table 1).
Table 1. Empowerment score by domain using A-WEAI for women and men in dairy households, West Java, Indonesia, 2021

Note: A score above 0.80 means empowered, and below 0.80 means disempowered (Alkire et al., 2013)

However, deeper analysis showed that this was misleading. Women remained less empowered in production decisions (where husbands dominated) and in leadership (where women lacked cooperative membership and access to resources, services, and milk market). The index masked these nuances, reminding me that empowerment cannot be reduced to a single number (Bageant et al., 2024).

Reflections and Recommendations
From my research and fieldwork, I have three recommendations:

1. **Support care and community roles**: Provide childcare during training, flexible extension schedules, and stipends for women facilitators.
2. **Expand empowerment metrics**: Complement quantitative indices with qualitative insights that capture local realities.
3. **Measure time use effectively**: Develop simple, digital tools to document both paid and unpaid work, recognising women's full contribution to farming households.

Conclusion
Indonesia's dairy sector is full of potential, but its future depends not just on increasing milk yields, but on empowering the farmers — especially women — who produce it.
Through inclusive extension, gender-sensitive technologies, and better measurement of empowerment, we can build a more resilient and equitable dairy industry. My hope is that by recognising women's contributions and addressing the barriers they face, we will see dairy farming households that are more productive, more resilient, and more just.

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