THE UNIVERSITY of ADELAIDE

The Centre for Global Food and Resources

The IndoDairy Smallholder Household Survey

From Farm-to-Fact

Factsheet 1: Introduction to the "IndoDairy" Project & The IndoDairy Smallholder Household Survey

Background

With a population of approximately 263 million people (FAOSTAT, 2016); Indonesia is the fourth most populous country in the world after China, India and the USA. The Island of Java is home to 58% of Indonesia's population and it is the most populated island in the world. The Indonesian economy is in transition and growing rapidly resulting in massive urbanisation, increase in disposable income and changes in food consumption patterns.

The Indonesian Dairy Sector

Traditionally, dairy has not been a significant component of Indonesian diets, however, with a growing middle class, the demand for animal-based protein products has driven an increase in consumption of dairy products. Milk consumption has doubled in the past three decades and continues to increase annually. While there has been a rapid growth in demand in dairy products, domestic production has struggled to keep up with growing demand.

In 2012, Indonesia was producing less than one-third of its domestic demand for dairy products. This has contracted further in recent years. In 2014, approximately 40% of the nation's dairy herd was slaughtered to deal with high beef prices, which has further added to the fragility of domestic milk supply chain.

The dairy supply chain in Java faces a multitude of growth-limiting constraints, including institutional, government, socio-economic, technical and post-farm gate challenges. Pre-farm gate impediments include a smallholder dominated production base with very low economies of scale, limited forage availability and quality, low animal reproductive performance, poor animal health management and poor milk quality with limited technical skills in these areas. Various socio-economic and agro-economic barriers prevent the adoption of available knowledge and technology. These are currently limiting on-farm efficiency, farm growth and profitability.

Post-farm gate, the production of long-life, reconstituted products by many Indonesian dairy processors has allowed imported ingredients to be substituted for fresh whole milk. This has resulted in the price for whole milk aligning relatively closely with international dairy commodity market prices. Many of the local processors are also multi-nationals with highly developed global

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supply chains. There are, however, some innovative small local processors using fresh milk to manufacture short-life dairy products. Anecdotal evidence suggests that the number of small local processors is increasing.

The IndoDairy Project

In June 2016, the project "*AGB/2012/099: Improving Milk Supply, Competitiveness and Livelihoods of Smallholder Dairy Chains in Indonesia*" (**IndoDairy**) commenced and aims to improve milk supply (quantity and quality) by 25% by 2020 for at least 3,000 dairy producers in West Java and North Sumatra.

The project has the following three objectives:

Objective 1: Identify and recommend strategies and policies to support development of sustainable, profitable and smallholder-inclusive dairy supply chains in North Sumatra and West Java.

Objective 2: Identify barriers to adoption of profitable management practices and farm business models and develop strategies to inform development of extension programs in West Java and North Sumatra.

Objective 3: Develop, pilot and evaluate best-bet dissemination to improve adoption of innovative dairy management practices by smallholder farmers in West Java.

The IndoDairy project is funded by the Australian Centre for International Agricultural Research and is a research partnership between key Australian and Indonesian research agencies. The Centre for Global Food and Resources (CGFAR) at the University of Adelaide is the lead organisation with support from key in-country partners including Indonesian Centre for Animal Research and Development (ICARD), Bogor Agricultural University (IPB), The Indonesian Centre of Agricultural Socio Economic Policy Studies (ICASEPS) and in consultation with Subtropical Dairy Ltd.

The IndoDairy project uses interdisciplinary research methods, including whole of chain analyses of dairy value chains in North Sumatra and West Java. This research includes deep consultations with key stakeholders in the sector including government agencies, dairy cooperatives, NGOs and private sector enterprises, to identify existing and future whole-of-chain opportunities for industry and government. The project has established collaborative arrangements with five dairy cooperatives in four districts of West Java to enhance engagement with key stakeholders and smallholder dairy farmers in the region.

Why an IndoDairy Smallholder Household Survey?

During August and September 2017, a baseline household survey of 600 dairy farming households located in West Java, Indonesia was implemented using digital data collection applications. The survey is called the **IndoDairy Smallholder Household Survey (ISHS)**. The ISHS is a primary focus of Objective 2 of the IndoDairy project.

After extensive interviews with key stakeholders in the dairy sector, including national and local government, universities, milk processing companies, and dairy co-operatives, the ISHS was designed to collect a wide range of useful information from dairy farming households. The information allows the research team (and interested stakeholders) to understand the current socio-demographic and farm characteristics of dairy farming households in West Java as well as issues affecting and limiting smallholder profitability and opportunities to improve smallholder livelihoods.

The survey included 20 sections, collecting information on the following:

- Household characteristics of dairy farmers
- Information on livestock and land assets
- Individual animal information
- Management of dairy farm animals
- Access to credit

- Information on inputs and labour
- Costs and expenses of managing dairy farm operations
- Information on household income
- Information on milk production
- Sales and marketing information
- Information on adoption of dairy farming technologies
- Group membership of dairy farmers
- Farmers' attitudes and perceptions
- Information on role of women by using the 'Women's Empowerment in Agriculture Index' (WEAI)
- Information on household food security by using the 'Household Food Insecurity Access Scale' (HFIAS)

Information collected and presented in this factsheet series provides a broad overview of many aspects of dairy smallholders in West Java, Indonesia. This insight is helping the research team to better understand issues faced by the households, including barriers to adoption of technology and profitable management practices. The information is helping to identify opportunities to improve adoption rates and address issues with dairy production and management.

Further, data and insight from the survey is aiding in the development (e.g. design and testing) and deployment of innovative technical practice change / extension programs with the aim of improving the dairy sector productivity and livelihoods in the region. The extension programs will be delivered from late 2018 to 2020 in collaboration with dairy cooperatives that are key partners in the program. The baseline information from the survey will also be used in the evaluation of the effectiveness of the extension programs at the end of the project.

About our factsheets

This set of factsheets provides a complete overview of the information gained from the analysis of the data collected from the Indonesian Smallholder Household Survey (ISHS).

The factsheets are available on the project website: https://www.indodairy.net/ and the Centre for Global Food and Resources website:https://www.adelaide.edu.au/global-food/research/international-development/indonesia-dairy/

More information

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