

Dairy

Priority statement

Whilst the dairy sector has a high potential for further development, given the relatively small number of farmers, its presence in only one of the five study areas and the high levels of support provided to farmers by value chain participants, this sector is considered a **LOW – MEDIUM** priority for pro-poor agribusiness development.

Ninety seven percent of all of Indonesia's dairy cows are located on the island of Java in the provinces of East Java, Central Java and West Java. East Java is the largest milk producer, accounting for 57% of Indonesia's milk production (see Table 1). East Java has shown the largest growth over the last five years with dairy cow population and milk production increasing annually by an average of 15% and 24% respectively.

Table 1. Dairy production statistics for selected provinces in Indonesia, 2011

Basic Statistics	East Java	East Nusa Tenggara (NTT)	West Nusa Tenggara (NTB)	Indonesia
Volume of Production (million litres) ¹	531.7	-	-	925.8
Value of Production (Rp billion) ²	1.86			3.24
People Employed ³	There is between 100,000 and 150,000 dairy farmers; over 30 companies involved in milk processing producing 870,000 tonnes of dairy products in 2009 80% of dairy farmers are smallholders, of these 80% are contracted to dairy processors and 20% are independent.			
Source: ¹ Badan Pusat Statistik 2011 (preliminary figures): current short fall of milk. Demand outstrips supply. ² Rp. 3,500 per litre - IFC; Dairy Industry Development in Indonesia Final Report - May 2011 ³ IFC; Dairy Industry Development in Indonesia Final Report - May 2011				

Poverty and sustainability

Is there potential to reach large numbers of poor households in production and post-production?

- No. The number of dairy farmers in Indonesia is between 100,000 and 150,000. Despite the government support for this sector, this number is not likely to increase to even 500,000 and the production footprint is small.
- The continuing expansion along the value chain offers employment for workers as investment in new processing plants continues.

What is the potential to increase income for producers?

- Moderate to high. Returns made by dairy farmers are considered to be good supplementary income.
- In East Java, 94% of cows are owned by individual farmers where dairying is only a part time business for the majority. However, for some individual farmers milk is their main income source.
- Farmers get paid on milk quality and output, so efforts to improve these factors will likely result in increased income for producers. There is a lack of transparency of information regarding prices flowing down to farmers.
- Milk quality is an issue. Farmers could earn on average at least IDR. 500–600 per litre more for milk with low total solids and total plate count (TPC). Low milk quality is due to poor management practices and cool chain logistics.
- Access to better genetics will also improve herd productivity, and the provision of better quality feed will also increase milk output per cow.

What is the agro - ecological feasibility?

- Limited information exists on the ideal characteristics of dairy locations in Indonesia; however one report indicates that there is a scarcity of land at suitable elevation for dairy cattle farming.
- Milk production is dependent on access to an abundant supply of feed. This is a limiting factor in location.

Sustainability (economic and environmental)

- The dairy industry has been expanding to meet the increasing demand for milk and dairy products.
- Liquid milk consumption has increased with growing awareness of the people of the importance of milk for their health. Over the last six years the volume and value of the liquid milk consumption market has grown by 16 and 20% respectively.
- The liquid milk market segment is forecast to continue to increase by 16% per year and by 2014 reach 604,970 tonnes.
- With individual farmers constituting 94% of the dairying sector and each farmer typically running 3 or 4 dairy cows on small areas, no specific environmental concerns are evident in the literature available.

Does the chain/commodity fit with the focus of Government programs and priorities?

Yes, dairy is an important industry sub sector. Specifically,

- The Government is encouraging the development of the dairy and beef industries in Indonesia and is providing IDR 145 billion of subsidy for the purchasing of dairy cows and beef cattle. Four major Indonesian banks are responsible for managing this subsidy scheme.
- The Government has committed resources to support the development of Indonesia's dairy industry with the aim to achieve 50% self-sufficiency by 2014. To achieve this target a blue print for dairy industry development has been developed.

How project-crowded is the sector? (To what extent are sector needs addressed by current donors?)

- A wide range of support is provided to dairy farmers by the cooperatives and milk processors.
- Training and extension to dairy farmers has been provided by various international aid organisations in cooperation with local research institutes; private companies that supply equipment and products to dairy farmers; the DGLAHS and Regional Government and large milk processors.
- The IFC recently funded a detailed value chain study of the sector to identify opportunities and roles for IFC to promote a sustainable and inclusive dairy industry in Indonesia.

External risk

- A moderate to high risk to maintaining productivity exists during the dry season due to the limited availability of feed for dairy cows. The supply of milk from the major production centres on the island of Java declines as a result.
- A moderate to high risk exists regarding quality. The Government has a milk quality standard (SNI) which stipulates the quality parameters for fresh milk. Currently only 12% of all dairy farmers meet the SNI. The main problem with milk quality is very high TPC above the SNI level of one million.

Structure of the chain

What is the potential for improving market access?

- Import regulations on fresh product limit the import of fresh milk and products to the domestic market.
- The domestic dairy sector has significant potential to increase supply to meet the increasing demand by domestic consumers.

What is the scalability and transferability potential?

- Technical innovations leading to income gains are highly transferable. This requires extension to the farmers to encourage adoption.
- Industry activity is concentrated in Java. Other areas of Indonesia may be suitable climatically and economically for dairy development. Availability of feed is an issue for expansion. Currently the industry relies predominantly on the traditional feed gathering system of gathering forage grasses from the farmer's land, or from along the sides of roads, irrigation ditches, forests or other such places.

Is there potential for post-harvest productivity / value-added?

- The milk supply chain in Indonesia is quite developed, with many companies and multinationals already invested and looking to invest further. There are 27 companies operating in powdered milk, 4 companies operating in sweetened condensed milk, and 31 companies operating in liquid milk.

- There has been minimal new investment in dairying over the last five years however two major dairy processors are in the process of expanding operations into North Sumatra.
- There is potential to grow Indonesia's milk export market, particularly into the Asian market.

Is there sufficient infrastructure availability?

- No. Distributing perishable produce to major urban centres in Indonesia's 33 provinces presents a major problem. A lack of refrigeration and an inferior distribution system results in problems maintaining a cold chain system for perishable products made from milk.
- More milk cooling units need to be placed as close as possible to farmers at MCCs in the farmer villages to address poor quality standards.
- GoI supports the expansion of the industry and provides loans to farmers to buy dairy cows. However access to the money is difficult as many farmers don't have collateral to meet the bank requirements.