Factors Affecting The Profitability and Efficiency of Dairy Value Chain: Case Study at Dairy Cooperative KPS Cianjur Utara

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Dairy workshop and fieldwork,17 February 2015, Bogor, Indonesia

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1. Background

- The average growth of Indonesian milk consumption of milk powder, liquid milk, and low-fat milk reached 2.9% per capita in 2006-2010 (FAPRI, 2010).
  - The growth was the highest compared to other ASEAN countries, such as Vietnam, Philippines, Thailand, and Malaysia.
- The domestic milk production was only able to meet 30.4 % of the national milk demand→ The average growth of national milk production at the farmer level only reaches 2% per year.
- Low level of production:
  - Dairy business in Indonesia is still managed by traditional methods→ far from the principles of good farming practices (GAP)→ Farmers face difficulty to produce fresh milk with high quality standards.
- Meanwhile, dairy processors impose strict standards for fresh milk.
  - Farmers who cannot meet the quality standards receive lower prices



2. Objectives

- The General Objective:
  - To map the value chain of dairy product by using dairy cooperative KPS Cianjur Utara as a case study in order to determine the constraints/barriers faced by dairy farmers and cooperatives
- The specific objectives :
  1. To conduct preliminary observations on dairy value chain from farmer to processor levels with respect to profitability, efficiency and factors Influencing them
  2. To recommend the development of an integrated training program for extension agents and other stakeholders in order to address the major challenges faced by small farmers and cooperatives.

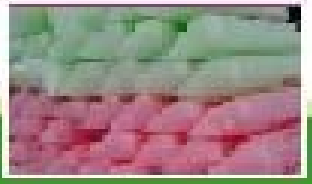


3. Method

- This study uses primary data obtained through:
  - Focus Group Discussions (FGDs)
  - Depth interviews and direct observations in the field.
- Respondents:
  - The management staff of the dairy farm cooperatives and farmer cooperative members.
- A structured questionnaire was used during the survey.
- Location of the study:
  - Dairy cooperative KPS Cianjur Utara



4. Results and discussions


4.1. Overview of KPS Cianjur Utara

- KPS Cianjur Utara recently changed its name in September 2014 (previously known as KUD Mandiri Cipanas).
  - The KUD Mandiri Cipanas was originally established by the corporation between Koperasi Serba Usaha (multi-purpose cooperative) with Koperasi Pertanian (KOPERTA or agriculture cooperative) in the Pacet region.
- KPS Cianjur Utara:
  - Employs 26 staff members and 3 managers.
  - Has 200 registered farmers→ divided into 6 groups of milk collection areas: Garung I, Garung II, Campaka Mulya, Sunda Jaya, Sumber Jaya, and Giat Jaya.
  - 121 active farmers.
  - Produce fresh milk about 3300-3500 liters per day and the cows population is 450.
- KPS Cianjur Utara conducts total solid and resazurin tests to monitor milk quality being supplied to the cooperative.
- The milk quality test sampling that is done individually for each farmer is intended to differentiate the quality of milk between individual farmers→ price determination



4.1. Overview of KPS Cianjur Utara (Cont..)

- Services provided by KPS Cianjur Utara to farmers:
  1. Collecting the milk from farmers, and then sending the milk to dairy processors.
  2. Providing animal health services delivered by inseminators and vets.
  3. Providing concentrate, manages a lab.
  4. Provides artificial insemination.
- One of the efforts to reduce dependence of cooperative on selling milk to dairy processors (Cimory) and increase value added is by processing fresh milk→ "Yogurt Drink" and "Ice Yoghurt" using "CIPAMILK" as brand name
- Challenges faced by the cooperative :
  1. Low education level of the cooperative members;
  2. Lack of commitment by members to supply to cooperative;
  3. High costs of feed and medicines,
  4. Other production input and infrastructure needed to produce high quality of milk.



4.2. Overview of KPS Cianjur Utara members

- Majority members of cooperative raise Fries Holland cows by using Artificial Insemination (AI)
- The cow milking is done twice a day: 5:00 - 6:00 am and 14:00 - 15:00 pm.
- The average production of fresh milk by farmers is about 12 liters/cow/day.
- Farmers living closer to cooperative deliver their milk by themselves and farmers living far from the cooperative place milk in a collection center
- Farmers pay the transport costs to KPS at about Rp 100 per liter.
- Farmers sell 85% of milk production to cooperative
- The price of milk received by farmers depends on the quality of milk produced→ about Rp 3,500/liter to Rp 4,200/liter.
  - Meanwhile, 15 % of the milk production is sold directly to consumers, at a price of Rp 8,000 - Rp 10,000 / liter.
- The health management of the cattle is conducted by animal health officers from KPS Cianjur Utara and extension agents (PPL).
  - The farmers call the animal health officer when the diseases cannot be treated by themselves.



4.3. Technology Adoption

- Majority of farmers have known about AI and mastitis. All farmers use the AI method for the reproduction process. The implementations of AI are performed by the inseminators
- Many farmers know about forage fermentation technology, completed feed and silage. A number of farmers have attended extension training about nutritional value to improve the quality of forage. However, only a few farmers have implemented such technology.
- Although urine fertilizer and biogas technologies have been known, farmers state there are some difficulties to implement them → they don't raise cow in a large number
- Farmers also already know several technologies and management practices that might influence their dairy business→ e.g., administrative record about the dairy business, but only some farmers make the farming record.
- Farmers already know about milk quality testing and technology cooling unit. However, most farmers do not have the tools to test the milk quality.



4.4. Factors Affecting The Profitability and Efficiency of Cooperative Members

Factors affecting the small profits received by the farmers:

- The availability of forage to feed the cattle is limited.
- Farmers face difficulty to obtain additional cattle feed.
  - The concentrates provided by cooperative consists of two types: high quality and regular one. The concentrate with good quality has a high price, whereas the 'regular' quality concentrate is not good enough. Therefore, many farmers prefer to use potatoes instead concentrate.
- High quality calved/superior cow breeds are expensive.
- Dairy business management that is still traditional with small business scale.
- Farmers have a low level of technology adoption.



5.Conclusions and recommendations

- Conclusions :
  - KPS Cianjur Utara still relies on dairy processors to market fresh milk. Therefore, the milk price received by farmers is still predominantly determined by the processor.
  - Majority of farmers own small-scale farms adopting traditional management system.
  - Lack of technology adoption by the farmers. Farmers rely on traditional practices inherited from their family when running their dairy business.
  - High feed cost due to the lack of availability of forage for dairy cattle feed and the high price of the concentrates affect farms' production and profitability.



5.Conclusions and recommendations

- Policy recommendations:
  - Improving the business skills of cooperatives in terms of diversification of dairy products;
  - Enhancing training for the development of dairy cooperatives and farmers; and
  - Diversifying farmers' income by promoting the production of cow manure processing and communal male calf fattening.
- The study has limitations in investigating information about various production and marketing aspects. The questionnaire is quite complex while time for field survey is very limited.



THANK YOU