



DISCUSSION TOPICS:

- (1) Meet the increasing demand in Indonesia for safe milk supply,**
- (2) Standardizing and labelling milk and dairy products**
- (3) Support for refrigeration/cold chain development**

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**Ministry of
Agriculture**



Australian Government

**Australian Centre for
International Agricultural Research**



**THE UNIVERSITY
of ADELAIDE**

MEET THE INCREASING
DEMAND IN INDONESIA FOR
SAFE MILK SUPPLY

Demand for milk in Indonesia

- Milk consumption per capita in Indonesia is lower than consumption in other ASEAN countries.

ASEAN Countries	2014	2016
Indonesia	13.2	16.5
Malaysia	36.2	50.9
Thailand	22.2	33.7
Philippines	17.8	22.1

- However, milk consumption per capita in Indonesia continues to increase and is expected to increase with a higher growth rate in the future as a result of increased levels of education and income of the people.

	2000	2005	2010	2016
Cons per capita (Kg/Cap/year)	6.4	9.3	13.2	16.5
Population (million)	205.1	222.8	237.6	258.7
Total Consumption (Tons)	1312640	2072040	3136320	4268550

Source: MOA and BPS

Shortage of domestic supply & production (1)

- Increasing demand for milk cannot be met by domestic production. Both domestic milk production and dairy cow population has been stagnated although somewhat increasing in the last 3 years.
- As a result, imported dairy products have increased steadily to meet the increasing demand. At present, imported milk counts more than 80% of total milk and dairy product consumption.
- Dairy cow population has been concentrated in Java and has been fluctuated although somewhat increasing in the last 3 years.

Island	unit	2009	2011	2013	2015	2017
Sumatera	tons	4343	2383	4545	3101	3824
	%	0.9	0.4	1.0	0.6	0.7
Java	tons	468187	592520	437579	513514	538852
	%	98.6	99.2	98.5	99.0	98.9
Others	tons	2171	2310	2142	2034	2115
	%	0.5	0.4	0.5	0.4	0.4
Indonesia	tons	474701	597213	444266	518649	544791
	%	100.0	100.0	100.0	100.0	100.0

Shortage of domestic supply & production (1)

- Increasing demand for milk cannot be met by domestic production. Both domestic milk production and dairy cow population has been stagnated although somewhat increasing in the last 3 years.
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Others	cows	2171	2310	2142	2034	2115
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Indonesia	cows	474701	597213	444266	518649	544791
	%	100.0	100.0	100.0	100.0	100.0

Shortage of domestic supply & production (2)

- Although fluctuated, fresh milk production has been somewhat increasing in the last 3 years.

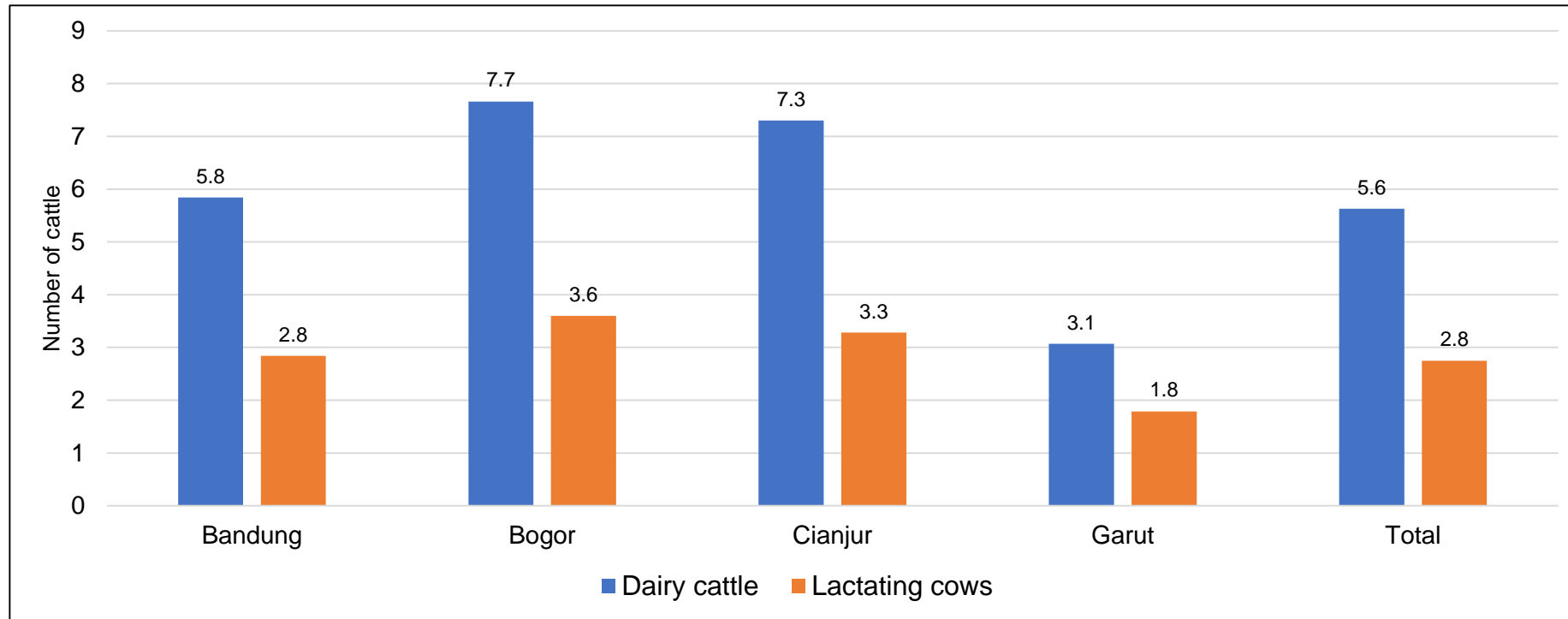
Island	Unit	2009	2011	2013	2015	2017
Sumatera	Tons	4395.6	3553.0	4667.0	3416.1	3998.5
	%	0.5	0.4	0.6	0.4	0.4
Jawa	Tons	819751.2	967234.0	779795.0	828645.8	912898.5
	%	99.1	99.2	99.1	99.2	99.2
Others	Tons	3101.9	3907.0	2387.0	3062.7	3196.4
	%	0.4	0.4	0.3	0.4	0.4
Indonesia	Tons	827248.7	974694.0	786849.0	835124.6	920093.4
	%	100.0	100.0	100.0	100.0	100.0

- So far, dairy farming is concentrated in Java. Given scarcity of land and resources, relying dairy farming and milk production in Java would be very expensive and impossible to meet the increasing demand for milk in Indonesia.

Constraints of Smallholder Dairy Farming

- Small scale farms (average: 6 cows per farm) → ISHS-West Java
 - Inefficient and high cost of production
 - Low productivity per cow per day: 14-15 litre/cow/day.
 - Low quality of fresh milk → has resulted in a low price
- Problems of dairy farm expansion in Java:
 - Scarcity of land for dairy farming, especially for forage production
 - Increasing scarcity and cost labors.
 - Relatively high price of feed and concentrates
 - Scarcity of clean water availability in the most dairy farm areas
 - Limited access to capital → issues of collateral → 82% of dairy farmers get working capital from their own savings (ISHS-West Java).

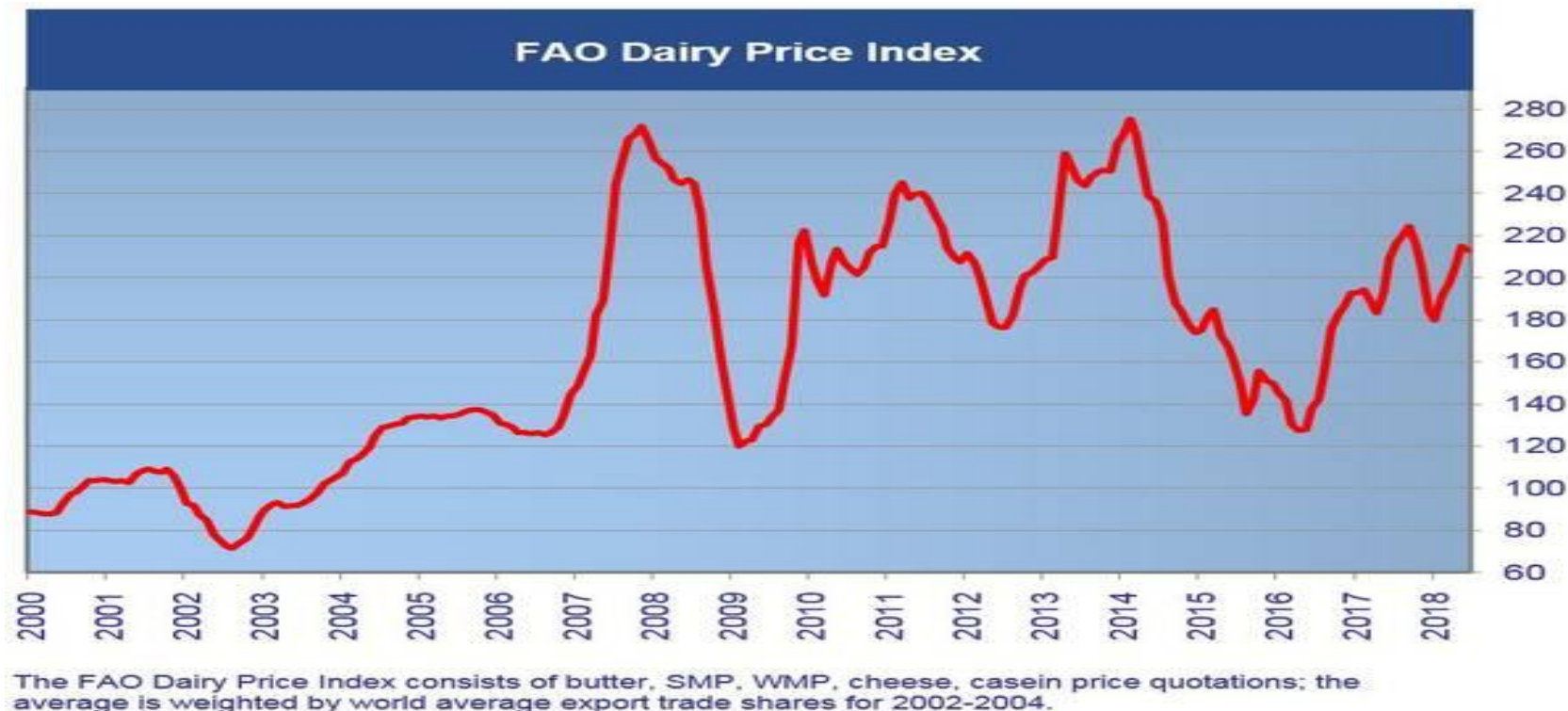
Size of Dairy Farm in West Java, 2017



IndoDairy Smallholder Household Survey (ISHS) in West Java in 2017 found that the average size of dairy farm varies between producing districts, with the average size was: 6 total cows, 3 lactating cows. The average biggest size was in Bogor: 8 cows and 4 lactating cows, and the smallest size of 3 cows and 2 lactating cows was found in Garut

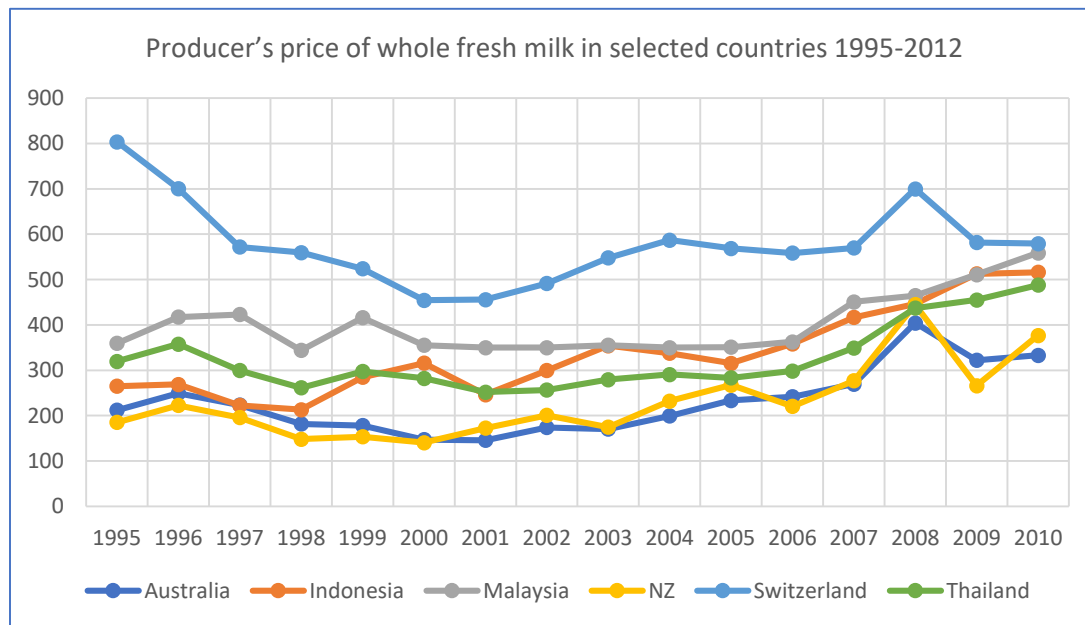
How to meet the increasing demand (1)

- 1) Policy and program to enhance domestic production capacity in order to increase milk production → this option is a must to gradually reduce the reliance of import to meet the increasing demand, particularly given the fact that world market prices of dairy product has been very volatile.
- 2) Import to fulfil the shortage of domestic supply/production → optimal import policy to meet the demand without jeopardizing the domestic dairy farming and processing.

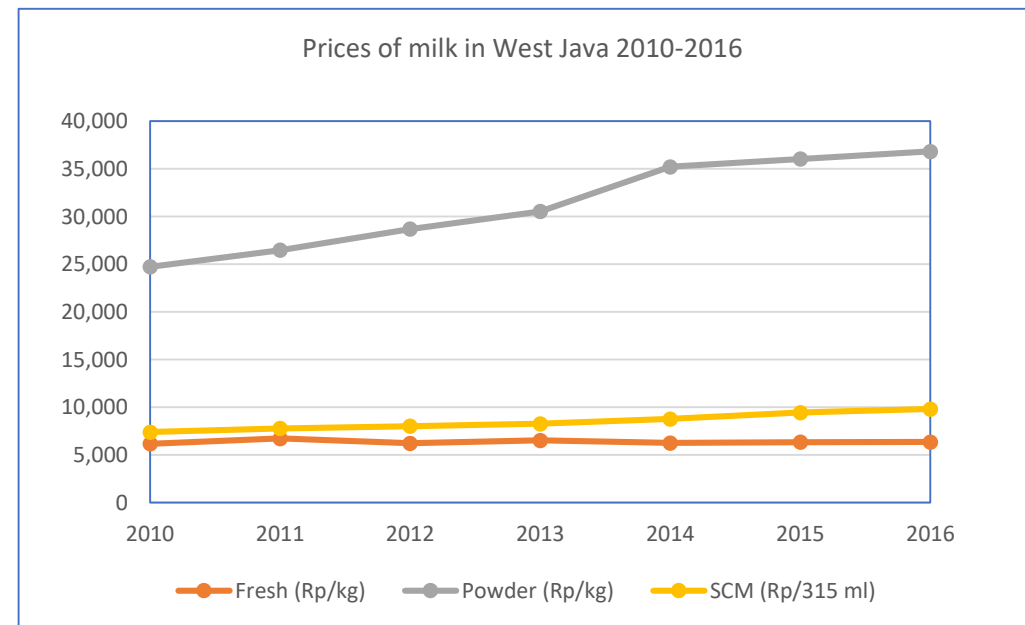


How to meet the increasing demand (2)

- Producer's price of fresh milk in Indonesia in 1995-2010 was , in fact lower than that of Malaysia and surprisingly much lower than that of Switzerland (a country known as milk and dairy exporting country), but much higher than the price in two other milk exporting countries, New Zealand and Australia.
- The prices of dairy products in Indonesia continued to increase in period of 2010-2016, but not the price of fresh milk in Indonesia was
- These are important facts to consider in the implementation of a national program to increase milk production and processing industry in Indonesia.



Source: FAOSTAT



Source: BPS

How to Increase Domestic Milk Production

- 1) Increasing domestic milk production of smallholder dairy farming
 - Increase dairy population
 - Increase productivity per cow per day
 - Increase quality of domestic fresh milk
- 2) Promoting medium, big and mega dairy farming in outer islands of Java
 - From smallholder to medium size of farm in Java
 - Medium size farm in and out of Java
 - Big and mega farms → out of Java
- 3) Managing importation of milk and dairy products
 - Import policy to meet the increasing demand for milk and dairy products without sacrificing domestic (smallholder) dairy farming but remains consistent with WTO rules → infant industry argument
 - To ensure remunerative prices for domestic producers and affordable prices for consumers

How to Increase Smallholder Dairy Production?

- 1) Increase dairy cow population
 - Facilitate heifer importation → trade facilitation and no import barriers.
 - Promote the establishment of domestic dairy breeding program
 - Increase dairy farmers' access to capital (access to KUR) → 82% of dairy farmers get working capital from their own savings (ISHS-West Java).
- 2) Increase fresh milk productivity → partnerships and extension services
 - Implement good farm management practices: feeding, milking, cow treatments and maintenance
 - Promote a conducive business environment → Pricing and import policies to safeguard domestic farms against unfair competition
- 3) Increase quality of fresh milk → partnerships and extension services
 - Implement good farm management practice
 - Implement Automatic Milk Collecting Point (individual base measurement practice) → a fair pricing → good quality gets price incentive, bad quality gets penalty
 - Use refrigerators (establishment of Cold Chain logistic facilities) → (partnership).

Ministry of Agriculture Regulation No.26-2017 on Supply and Distribution of Milk (1)

- MOA Regulation No. 26 2017 has triggered pro-cons, especially related to the following articles:
 - Article 23: Business Actors are obliged to carry out Partnerships with dairy farmers, Farmers Groups, and/or Dairy Cooperatives through the utilization of domestically produced fresh milk or its' promotion in mutually beneficial way.
 - Article 24 (1) Partnership through SSDN utilization as referred to in Article 23 must be carried out for Business Actors who produce processed milk, (2) Business actors producing processed milk as intended in paragraph (1) must have a milk processing unit.
- The partnership is, among others, intended to improve the quality of milk to meet industry standards. The partnership can be in the form of establishing facilities and infrastructure such as building cages, installation of clean water, milk collecting points (MCP), cooling units, transfer tanks, and other facilities.
- MOA Regulation No. 26 2017 has been revised into MOA Regulation No 33 2018 by eliminating (revising) the articles on partnership obligations and milk absorption → it has triggered another pro-cons and it is expected to be revised again.

Automated and Digitized Milk Collection Point

- The Automated and Digitized system of MCP that was initially established and operated by KPBS in Pangalengan in cooperation with and funded by PT FFI has improved the quality of fresh milk produced by dairy farmers in the region.
- The AD-MCP measures the quality of fresh milk stored by farmer individually → this encourages farmer to do better management practices to produce good quality of milk to get price incentives. The following table presents quality improvement (before and after AD-MCP) in Pangalengan, Bandung

Quality indicator	AD-MCP	NA-MCP
Total Plate Count-TPC (cpu/ltr)	264194	761000
Total Solid-TS (%)	11.34	12.25
Total Fat (%)	4.48	4.26
Weight Density (Kg/ltr)	1.03	1.03

- Premise: AD-MCP is quality promoting system as it is a more precise (robust) as well as a fairer way of milk quality measurement, since it is an individual base measurement with a fair pricing as good quality gets price incentive and bad quality gets price penalty.

How to Promote Medium, Big and Mega Dairy Farms?

- From small to medium size
 - Facilitate heifer importation → no import barriers
 - Increase access to credit for smallholder dairy farms
 - Promote mutually beneficial partnership between smallholders, Processors and Importers.
- Promoting Medium size of dairy farm in and out of Java
 - Reducing investment barriers for domestic investors
 - Investment incentives for dairy farming business in out of Java.
 - Pricing and import policies to safeguard domestic farms against cheap imported products
- Promoting Mega dairy farms in out of Java
 - Reducing investment barriers for both domestic and foreign investors
 - Provide investment incentives for dairy farming dan product processing in off Java.

STANDARDIZING AND LABELLING MILK PRODUCTS

Standardizing and Labelling Milk Product

- One way to ensure a continuity of increased demand for fresh milk is to create a fresh milk market by imposing quality standard requirements and continuously promoting the superiority of pure fresh milk compared to processed milk such as milk powder and sweetened condensed milk.
- The National Standardization Body (BSN) to immediately set national standards for dairy products, particularly a minimum content of real fresh milks (not reconstituted milk) in pasteurized fresh milk and UHT milk products.
- With the regulation that requires a minimum limit of fresh milk content (not reconstituted milk) in pasteurized milk and UHT milk would directly create market demand for domestically produced fresh milk.
- This is an effective way to force milk processing companies (IPS) to absorb and use domestically produced fresh milk to produce pasteurized milk, UHT and other dairy products that require fresh milk.

Labelling Milk Product

- Greenfields mega-farm company has produced pasteurized milk and UHT which uses fresh milk, which their prices are more expensive than the prices of companies' pasteurized and UHT milks.
- In Japan, the term "honest milk" is known to describe "real fresh milk" contained in pasteurized milk, UHT milk, and other dairy products that use fresh milk, instead of reconstituted milk.
- Implement national standards for dairy products on a mandatory basis and oblige producers to include labels on each milk product.
- Periodically, BPOM has to monitor by means of sudden inspections at markets and supermarkets.
- The law and regulation need to be upheld and sanctions need to be imposed on milk processing companies that violate the rules and provide incentives for those who comply with the rules.

SUPPORT FOR
REFRIGERATION AND COLD
CHAIN DEVELOPMENT

Cold Chain Logistics

- The presence of refrigerators, cold storages and cooler boxes is very important to preserve the quality of milk and dairy products → Cold chain logistics.
- Cold chain logistics is the management of the flow of products from origin to destination in a temperature-controlled supply chain involving an uninterrupted series of refrigerated production, distribution, and storage activities.
- Cold Chain: a network of refrigerators, cold stores, freezers and cold boxes organized and maintained so that milk and dairy products are kept at the right temperature during transportation, storage and distribution from farm and factory to the end users.
- Cold Chain logistics can be developed through mutually beneficial partnerships between breeders / farmers cooperative groups with IPS and Importers. Because it involves many ministries and institutions, this partnership is realized through presidential regulations or government regulations.

THE WAY FORWARD:
POLICY RECOMMENDATIONS

Conclusion and Recommendation

- Increase milk production of smallholder dairy in Java → Government regulation for partnerships between IPS, importers and dairy farmers → from Agriculture Ministry decree to Presidential Instruction.
 - Increase dairy cows population
 - Increase productivity of dairy cows
 - Increase fresh milk quality
- Promote medium and mega dairy farm in outer Islands (off Java)
 - Reducing investment barriers for both FDI and domestic investment
 - Incentive for investment in dairy farming in outer Islands.
- Increase quality of domestic fresh milk
 - Implement Automatic-Digitize Milk Collecting Point.
 - Implement fair pricing → good quality get price incentive, bad quality get price penalty.

Conclusion and Recommendation

- Promoting fresh milk consumption and “honest milk” in the market
 - Introduce and enforce standard quality and labelling regulation → BSN & BPOM
 - Implement national (fresh) milk drinking program at school (kindergarten and elementary schools)
- Promoting mutually beneficial stakeholders’ partnerships
 - To improve the quality of fresh milk
 - To establish cold chain logistics
- Fresh milk pricing and import control policies
 - Ensuring dairy farmers receive a remunerative prices for fresh milk
 - Implement Tariff Rate Quotas (TRQ) for dairy products

THANK YOU