DAIRY Technology

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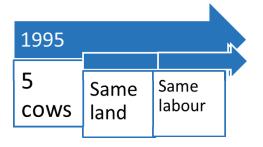
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Introduction

1995 :Government started to promote dairy raising in rural area to generate income in agriculture farms

2013 : 229,899 milking cows 500,418 dairy cattle

3,102.49 tons/day



18-25 milking cows
12-10 heifers
20-15 calves

Cooperative



Farm members Milk Collecting Center



Factory





- Pasture / roughages



Service - Concentrate

- AI
- Primary Lab
- Extension



Standard Lab. 18 B /kg. **Factory gate price**

MILK PRODUCTION 2008-2012 4,000.00 3,500.00 3,000.00 RAW MILK (tons/day) 2,500.00 2,000.00 1,500.00 1,000.00 500.00 0.00 JUN AUG NOV FEB MAR API MAY JUL OCT 2,091.3 1,987.5 1,924.6 1,970.9 **→** 2008 2,234.2 2,298.0 2,137.7 2,138.6 2,097.5 2,061.6 2,231.4 2,348.5 **--**2009 2,438.1 2,474.9 2,436.2 2,460.4 2,426.8 2,427.8 2,317.3 2,222.8 2,341.6 2,357.6 2,522.9 2,609.4 -2010 2,622.3 2,647.2 2,704.2 2,691.9 2,684.3 2,624.4 2,638.1 2,398.2 2,321.7 2,892.9 2,867.9 2,842.3 2,745.2 2,627.6 2,645.7 2,683.3 -2012 3,159.9 3,359.6 3,137.0 3,164.1 3,137.8 3,123.9 2,998.3 2,969.0 2,935.3 2,913.2 2,911.1 2,978.8

1. Reproductive Herd



- Upgrading native cows
- Producing crossbreed Tropical HF contain 82.5-93.75 % HF
- AI 100 %

Technology need -

- Heifers Replacement Farm
- Calf Replacement Farm



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2. Feed Management



Soybean meal + Waste beer + Cassava

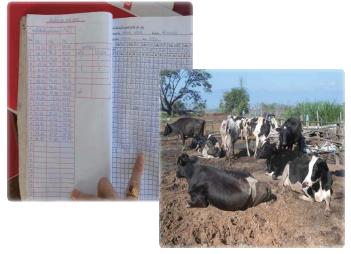
- Lack of pasture in dry season
- Raw material feed from nearby factories such as: pineapple shell, corn stem, cassava shell and palm cake
- few Silage

Technology need Total Mixed Ration





3. Health and Hygiene Management



- poor reproductive performance
- health problems

Technology need -



- Record herd analysis
- DHI program



4. Quality Milk Control



Technology need -

- Cooling chain
- Cooling tank in farm
- Decrees milking time
- Establish standard milk quality
- Good Agriculture Practices Farms
- Good Manufactories Practice -MCC

Process of Raw Milk Quality Control by Department of Livestock Development 2013 GAP (DLD) GMP (FDA) GMP (DLD) Milk Collecting Center **Dairy Farm UHT Plant** 16 $4^{0}C$ 103 Cooperative 37⁰C 17,094 Dairy Farmers 72 Private Pasteurized Plant 68 **500,418 Dairy Cows** 229,899 Milking Cows 3,102.49 Ton/d milk prod. Milk Grading ABCD Price adjustment to milk quality (Raw milk price Penalty - Adding 18.00 baht/kg at factory gate) water 20 times - Finding Antibiotic 60 times point > -0.520 °C -Bacteria - SCC : White blood cells >500,000 cell / cc. - Fat : Bacteria > 500,000 col / cc. : TS < 12 % Protein - Total Lab **Solid** Regional Livestock Office

5. Farm Management & Production Cost



- Enhance farmer knowledge by Advisory from DLD/University
- Lack of Labor

Technology need -



- IT Program/RFID Tags
- Equipment/machine
- Dairyman Job certificate

6. Marketing/Sustainable



Technology need -



- MOU between MCC & enterprises
- High quality milk extension
- Young dairy farmer idol

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Thank you for your attention