Building Our Common Future

Challenges for the Dairy Sector in Southeast Asia

Regional Symposium

January 18, 2014

Seminar room, Valley Garden Resort Hotel
Muak Lek, Saraburi, Thailand

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Introduction and background

Although, milk and milk products were not traditional food items in Southeast Asian diets, their consumption has been rising quite rapidly since the late 1990s. The production has risen as well but the consumption has outpaced production and as a result the net imports in the region have been rising even more rapidly. Indeed, the share of Southeast Asia in global net imports of dairy products increased from about 6 per cent in 1990 to almost 10 per cent recently. This shows emergence of ASEAN region as a potentially significant and growing market for dairy products. According to some recent forecasts the region is likely to exhibit the second fastest annual growth rate in the consumption of dairy products, next only to China. Rabobank estimates that, by 2020, the markets of ASEAN-6 (excl Singapore) will consume 3 billion litres more milk than in 2012. At the same time, the region still houses a large numbers of food insecure and undernourished people. Protein-energy malnutrition is persistent and populations generally fall short of recommended nutrient intakes. Calcium, potassium, magnesium, vitamin B_{12}, and iodine are nutrients that are often under-consumed even in visibly prosperous nations in the region. These conditions represent huge opportunity for public and private investment in milk production while at the same time contributing to household level food security and nutrition.

On the production side the dairy industry in Southeast Asia is characterized by smallholder production, except in some cases where there has been investment in large scale enterprises such as in Vietnam. Ownership of dairy animals by smallholder farmers typically ranges from 1 to 20 animals and marketing is through various channels (traditional, cooperatives and private sector). Given this structure, farm practices and technology are diverse and range from simple low input-low output traditional systems relying on farm forage resources and family labor to more modern dairy production facilities using in some cases the latest technology, specialized feed rations, and high grade genetics.

A number of governments in the region have prioritized dairy sector for public and private investment in their quest to reduce dependence on imports. Current efforts are producing

some results in raising the production levels but the region continues to face a number of challenges including poor farm practices and genetics, variable milk quality, growing scarcity of forage and high feed costs, increased competition for land and water and growing environmental concerns. Most countries however lack a coherent policy framework to steer and guide the sector development in a manner that builds synergy between public and private investment and contributes to household level food security, nutrition and environmental sustainability.

Additionally, the region is striving towards increased integration under the auspices of ASEAN Economic Community. Bali Concord II aimed at realizing the ASEAN Vision envisages a stable, prosperous and highly competitive ASEAN economic region in which there is free flow of goods and services and freer flow of capital, equitable economic development and reduced poverty and socio-economic disparities. The ASEAN Economic Community blueprint is structured around four key pillars -(i) a single market and production base; (ii) a highly competitive economic region; (iii) a region of equitable economic development; and (iv) a region fully integrated into the global economy. Under each pillar are economic measures to further ASEAN's goal towards an AEC. ASEAN has also concluded free trade agreements with New Zealand, Australia, China and India.

In the light of the foregoing, this symposium examined the regional challenges in promoting the development of dairy sector. A total of 60 participants from 7 ASEAN countries participated in the symposium (see Annex 1 for a list of participants). Representatives from three countries—Thailand, Myanmar and Vietnam shared the experience of dairy development in their respective countries. The presentations were followed by a panel discussion to discuss the questions outlined below

1. Considering the diversity of political and institutional structures, experiences with dairy development and given that countries within the region at different stages of economic development, how can countries in the region collaborate and cooperate to evolve a common vision and approach towards dairy development. How can public policy ensure synergy between private and social objectives?

2. There is an ongoing debate in the region about the ability of smallholder dairy producers to respond to a growing market that demands higher quality, consistent and diverse products. Some observers argue that scope of technology infusion on small farms is limited and hence the region must strive towards building and promoting large scale dairy farms. Others however argue that small farmers can very well meet the demands of

market but need public policy and organizational support that helps them acquire technical skills, finance and new technologies. Also, large farms could create more environmental problems than they could solve. How can the small farmers and other small and medium enterprises along the value chain leverage the opportunities offered by expanding markets?

3. Dairy markets have recently seen increasing price volatility in international markets. What are the sources of this volatility and what does this imply for investment in the dairy sector in Southeast Asian region?

Keynote address

Mr. Hiroyuki Konuma, Assistant Director General and Regional Representative of FAO for Asia and the Pacific in his keynote address highlighted social, health and environmental aspects of rapid growth and policy-induced structural changes in Asian dairy sector. In particular, he pointed out the need for increasing the efficiency of natural resource use as we strive towards meeting the demand in a more sustainable manner. In this context, he exhorted stakeholders to adopt and promote technologies that are green; and production practices that can help farm families to achieve higher productivity, profitability and resource use efficiency.

The second key message in his keynote address related to minimization of food waste. Mr. Konuma observed that today, the world produces enough food for the entire global population but still more than 800 million people in the world go hungry every day. This should simply not be acceptable. Food waste not only adds to economic inefficiencies, but is also socially unethical and environmentally costly.

The third message in his speech related to human nutrition. It was pointed out that nearly 1 billion people in this world already eat too little and another 2 billion suffer micronutrient deficiencies. Asia and the Pacific region accounts for 62 percent of chronically hungry, one third of globally stunted children and nearly three quarters of people with micronutrient-deficiencies. At the same time, many people in the region now consume excessive amounts of sugar and fats leading to obesity and poor health.

Thus, our agenda goes much beyond simply producing enough food to meet the growing demand. Our challenge is to build sustainable food systems and provide sustainable

nourishment to people. For the dairy industry, this means providing consumers with the nutritious dairy products they want, in a way that is economically viable, environmentally sound and socially responsible – now and for future generations. Considering the complexity of these challenges, Mr. Konuma urged stakeholders to come together and organize ourselves so as to ensure economic, social and environmental sustainability of food systems and build our common future.

Technical presentations

The keynote addresses were followed by three country presentations—Thailand, Myanmar and Vietnam. The presentations covered ongoing changes in the dairy sector, new challenges, good practices and initiatives from national and local perspectives. The presentations highlighted the importance of dairy sector for food and nutrition security both at national and at household levels and shared experiences in building dairy value chain, the school milk programs and other organizational challenges. These presentations are attached as an annex to this report (Annex 2).

Panel discussions

As noted above, the technical presentations were followed by a panel discussion. The panellist recounted the trends of growing milk production and growing share of Asia. Southeast Asia has more than doubled its production in the last two decades with Myanmar, Indonesia, and Thailand playing a major role in this growth. Despite the growth, however, the region accounted for less than 0.5% of total world milk output. Similar trends have been registered in the production of processed dairy products (butter and ghee, cheese, evaporated and condensed milk, dry skim milk and buttermilk). In terms of consumption, the per capita milk consumption in Southeast Asia remained way below world average.

The panellists further pointed out that in spite of the high profile they receive, dairy products are relatively not heavily traded across borders primarily because of perishability. Between 2008 and 2010, for example, only 2.5% of global fresh cow's milk was traded. International trade in dairy is primarily in butter, cheese and dry milk powders, with limited trade in fluid milk products, ice cream, yogurt and dry whey products. Even accounting for all its product forms, dairy trade has typically constituted less than 10% of global production. Dairy trade flows are shaped by resource endowments, comparative advantages, changing consumer

tastes and preferences, market proximities and government policies aimed to protect domestic markets. Total dairy trade has intensified in the recent years, exhibiting a compounded annual growth rate of 2.6% for the period of 1981-2009. Trade in dairy products doubled from 89 million metric tons in 1981 to almost 190 million metric tons in 2009. From 1981 to 2009, the net importing regions were Asia, Africa and America while Europe and Oceania were net exporters (Figures 2a and 2b). Despite their relatively low shares to the global dairy output, New Zealand and Australia are among the world's top dairy exporters.

The great concern, according to the panelists, is how ready the major milk producing nations are for AEC next year and how can small and medium enterprises prepare themselves to , meet the regional market demands? Putting the spirit of AEC, this necessitates some form of cooperation among the ASEAN countries. The cooperation might cover the following areas

1. **Knowledge Exchange**. This will provide the ASEAN countries information about the input needs and requirements for dairy development as well as related skills/expertise of each country.
2. **Trading and Countertrading**. Those countries that may have the skills and knowledge and are able to meet some of these needs and requirements of the other countries can play a catalytic role in capacity development of other countries. For example, one country may have the capacity to produce tropical breeds of dairy cattle that could be traded to other countries. Other examples are the need for dairy equipment, machineries, packaging materials and other logistics.
3. **Technology Exchange**. Through a regular exchange of dairy technologies and dairy husbandry practices, the countries in the region may be able to address the issues related to productivity, milk quality, extension support and services, dairy infrastructure, and probably cold chain and distribution facilities. Exchange visits between respective dairy leaders and farmers may also be encouraged.

There are also opportunities for cooperation in policy formulation that can synergize with social objectives. In this context, the respective governments need to be convinced about the role of dairy as a springboard for rural development (rural employment, nutrition, asset creation, livelihood, stimulus for support industries to emerge). To generate social synergies, however, the investments need to avor the small farmers and SMEs along the dairy value chain to enable them to leverage the opportunities offered by expanding markets. Small farmers will continue to survive as long as there is a market for milk and milk products.

Dairying will always be preferred over meat production as it allows efficient use of feed resources and provides a regular income to the milk producers. In this context, the panelists offered following strategies

1. Build on the dairy cooperatives' capability and capacity to provide its members support and logistics in terms of reasonably priced and good quality inputs including credit, milk collection, and milk processing and marketing services. These will consolidate milk volume and improve the coops' profitability levels including coop governance and leadership
2. Fast track the provision of extension support to the dairy farmers in improving their capacities in attaining a reasonable scale of operations
3. Continue to train professional dairy managers who can be tapped by the coops for the management of their dairy enterprises
4. Establishment of milk collection routes where unorganized farmers can sell their milk and get immediate cash
5. Being creative and innovative can help a lot to stay in the business
6. Improve the quality of raw milk at farm level (free chemical, antibiotic, etc);
7. Introducing of new technologies and development of the diverse, high quality and safe dairy products
8. Formation of dairy cooperatives/farmer groups to increase their bargaining power

Finally, the meeting concluded that there is a need to raise the profile of dairy sector in national and international policy forums in the region. This requires more rigorous sector analysis, knowledge dissemination, and policy advocacy − especially towards reorienting research to meet the needs of smallholder producers, instituting more systematic instruments for improvement and conservation of genetic resources, identifying new sources of feed and fodder, and designing and implementing mechanisms and products to mitigate against production- and market-related risks. Future agenda in this context should therefore focus on analysis and advocacy. In this context, it would be worthwhile to create a regional platform within the ASEAN structure (perhaps linked with ASEAN Working Group on Livestock) so as to facilitate cooperation and collaboration across countries.

Annexures

Annex 1: List of participants

No.	Name	Position
1	Mr. Yukol Limleamthong	Deputy Prime Minister, and Minister of Agriculture and Cooperatives
2	Mr. Ayuth Harindharanon	Deputy General-Director Department of Livestock Development
3	Mr. Kanit Likitwithayawuth	Deputy Secretary-General Office of Agricultural Economics
4	Mr. Saroj Inthapun	President Dairy & Food Industry Association
5	Mr. Pairoj Heangsaengchai	Livestock District #5, Chieng Mai
6	Mr. Auaychai Chaiyuttho	Director, Office of Livestock Promotion and Development
7	Mr. Chaiyant Lohapunwong	President Thai Dairy Industries Association
8	Ms. Vipawan Panapol	Expert Economist, Department of Livestock Development
9	Ms. Warangkana Toros	Expert Economist, Department of Livestock Development
10	Ms. Krongkeaw Borisuthsawas	Special Expert on Animal Husbandry
11	Ms. Suthida Ornsongchan	Special Expert on Animal Husbandry
12	Ms. Sahathaya Sub-rod	Livestock Research Testing Station
13	Ms. Yupa Laochindapun	Special Expert on Standards
14	Ms. Jirajit dissana	Standards Specialist
15	Mr. Kongkeit Srisuwan	Assistant Manager, Dairy Farm Business Division, Farm Chockchai Co., Ltd.
16	Mr. Panich Jarikpakorn	Assistant Managing Director, Farm Chockchai Group
17	Mr. Jaruwat Nutdechanunt	Animal Husbandry Specialist
18	Mr. Korkeit Somprasong	Special Expert Policy and Planning Analyst
19	Mr. Chanchai Rukkawathanakul	Special Expert Policy and Planning Analyst
20	Dr. Somkeit Somprasong	Head of Department of Animal Science, Kasetsart University
21	Mr. Preut Kerdchucheun	Managing Director, Dairy Home Co.,Ltd.
22	Dr. Suvichai Rojanasthien	Faculty of Veterinary Medicine, Chiang Mai University
23	Dr. Som Phattamavong	Vientiane, Laos
24	Chinh X. Tong	Hanoi, Vietnam
25	Nguyen Quoc Khanh	Ho Chi Minh, Vietnam
26	Dr. Atien Priyanti	Jakarta, Indonesia
27	Grace Cenas	Manila , Philippines
28	Jan Brouwer	Kuala Lumpur, Malaysia
29	Dr. Khin Hlaing	Yangon, Myanmar
30	Nasim Ali Mandal	Dhaka, Bangladesh
31	Munir Chowdhary	Dhaka, Bangladesh
32	Ms. Nattaya Chomnart	Expert Scientist, Department of Livestock Development

33	Dr. Vinod Ahuja	FAO
34	Dr. Vishnu Songkitti	FAO
35	Dr. Thumrongsakd Phonbumrung	FAO
36	Mr. Noppadol Tunvichien	Deputy Director Dairy Farming Promotion Organization of Thailand (DPO)
37	Mr. Suchart Jariyalertsak	Deputy Director, DPO, Thailand
38	Mr. Suvaraj Hongyantrachai	Assistant Director, DPO, Thailand
39	Mr. Suksiri Rungreung	Assistant Director, DPO, Thailand
40	Mr. Sumitr Likkachai	Head of Administrative Division
41	Ms. Achara Chartiyayont	Head of Investigation and Assessment Division
42	Dr. Narongrit Wongsuwan	Head of Policy and Planning Division
43	Mr. Munee Mesprasart	Head of Human Resources Division
44	Ms. Nithima Tuntrakul	Head of Finance Division
45	Mr. Mongkol Julkhing	Head of Procurement and Service Division
46	Ms. Oranooj Jirawatthananuruk	Head of Marketing and Distribution Division
47	Mr. Surath Sukjai	Head of DPO Office, Central Region
48	Mr. Narong Wongnien	Head of DPO Office, Southern Region
49	Mr. Chavalit Khaoplord	Head of DPO Office, North-Eastern Region
50	Mr. Visit Seangkloy	Head of DPO Office, Lower Northern Region
51	Mr. Vinij Wongwarolan	Head of DPO Office, Upper Northern Region
52	Mr. Chockchai Chaimongkol	Head of Dairy Research and Development Division
53	Mr. Sattha Leumsaisuk	Head of Dairy Promotion Division
54	Mr. Wuthichai Janpetch	Head of Agricultural Tourism Division
55	Mr. Kovit Nithichai	Specialist # 8
56	Ms. Sunun Thawornwong	Head of Marketing Division
57	Ms. Wanna Puengpean	Policy and Planning Analyst # 6
58	Ms. Suwathana Thongyod	Computer Specialist # 5
59	Ms. Rachadaport Ounthon	Policy and Planning Analyst # 4
60	Ms. Chotika Chaisuwan	Policy and Planning Analyst # 4

Annex 2 : Presentations

Dairy Development in Thailand

Dr. Narongrit Wongsuwan
Chief of Policy and Planning Department
Dairy Farming Promotion Organization of Thailand
18 January 2014

Outline presentation

- Development of dairy sector in Thailand
- Views on School Milk Programme in Thailand
- Conclusion

Dairy Development during last 51 years (1962 – 2013)

- The beginning of the Royal Granted Occupation in 1962
- The Role of Dairy Farming Promotion Organization of Thailand (DPO) since 1971
- The Important Roles of Government's Policy and Private Sector

The beginning of the Royal Granted Occupation

In Denmark, King Bhumibol became interested in the Danish's dairy farming, for he viewed that *dairy farming would provide Thai people healthy foods and help Thai farmers develop a secure and stable occupation, instead of trespassing forest grounds and conducting mobile plantation.*

Following a royal visit to Denmark:

- Establishment of Thai-Danish Dairy Farm 1962
- The Royal Chitralada Projects in Chitralada Palace
  - -1962 Dairy Farm
  - -1969 Milk powder processing plant
  - -1973 Milk collecting centre etc.
- King's dairy project in other provinces:
  1972 Nong-Pho Dairy Co operatives, 1989 Sakonnakon, etc.

Objective of Thai-Danish Dairy Farm and Training Centre

To initiate dairy farming and knowledge transfer in a complete dairying system:- farm demonstration, intensive dairy training courses and supervision for farmers, dairy processing and milk consumption campaign to Thai people.

The Great Relationship of the two royal families:

His Majesty King Bhumibol Adulyadej and His Majesty King Frederik IX of Denmark, together with Her majesty Queen Ingrid inaugurated the Thai-Danish Dairy Farm and Training Centre, at Muaklek, Saraburi Province.

A royal speech of His Majesty King Frederik IX of Denmark

" I am very happy that the Thai – Danish Dairy Farm is inaugurated in the presence of Your Majesty who has followed the preparations with active interest ever since they started during Your visit to Denmark .

I am convinced that Your Majesty's interest will be continued inspiration for those who work on this project of practical co-operation between our two countries . "

The Thai-Danish Dairy Farm is considered Thailand's first-ever dairy farm, which provided demonstration on dairy farming and systematic lessons, creating a new agricultural option for Thai farmers to adopt until today.

Dairy Farming then, can be considered the "Conferred occupation by His Majesty the King's royal grace"

The Thai-Danish Dairy Farm and Training Centre

- 1962
  - -Import of Red Dane Dairy Cows from Denmark
  - -The development of Dairy Farm management
  - -The dairy farm students of 1 year training course with the oversea excursion to Denmark
- 1964 Beginning of processing raw milk into dairy products
- 1969 The first dairy farming colony settlement in Thailand

Dairy Farming Promotion Organization of Thailand (DPO) Started in 1971

The Thai-Danish Dairy Farm under the administration of the Danish was transferred to the Thai government and, with His Majesty the King Bhumibol's royal grace, was granted the status of a state enterprise under the Ministry of Agriculture and Co-Operatives in the royal decree. It was then given a new name of The Dairy Farming Promotion Organization of Thailand (DPO) on August 31, 1971.

➡ Role on the development of the country's dairy cows industry as a whole including promoting dairy farming and producing dairy products , being a key sector to implement the government policies.

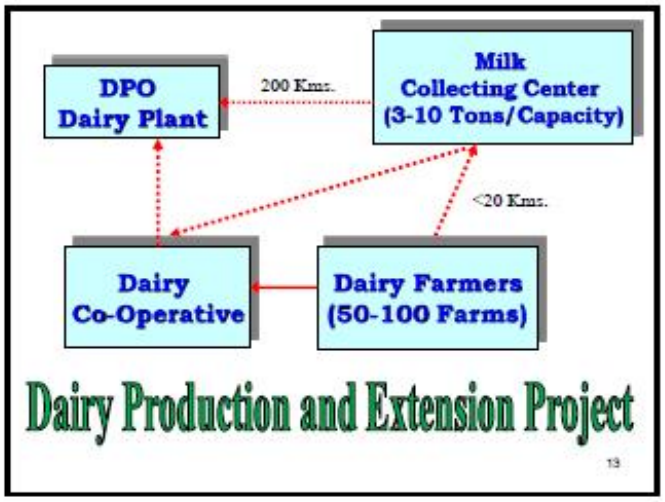
DPO's Activities since 1971

Dairy Industry

- 1972-1999 Establishment of dairy plants in different region
- 1976 UHT milk processing
  - -the 1st milk carton in Thailand

Dairy Extension

- 1982 The dairy breeding stock project
- 1984 Produced frozen semen


DPO
Dairy Plant
200 Kms.
Milk
Collecting Center
(3-10 Tons/Capacity)
<20 Kms.
Dairy
Co-Operative
Dairy Farmers
(50-100 Farms)
Dairy Production and Extension Project


D.P.O. Dairy Extension Model
Market Place
A.I and
Breeding
Improvement
Dairy
Farmers
Veterinary
Services
Extension and
Advisory Services
Dairy Herd
Information
Service(DIP)


Milk Collecting Center


ACTIVITIES :
Training courses for farmers at D.P.O.
: Dairy Farming Management
: Milking Machine and Maintenance


ACTIVITIES :
Mobile Training(at Center/Co-op)
:Improving Milk quality
:Milking Machine and mastitis control
:Feeds & Feeding
:Breeding Improvement and Sire Selection
:Repeat Breeding and Reproductive Problems

Products

The Important Role of Government's Policy

- 1982-1986 The fifth National Economic and Social Development Plan
- 1985 The National Milk Drinking Campaign Board
- 1992 Launching the School Milk Program
- 1994-1996 Dairy Promotion Program ; as part of Restructuring of Agricultural Production System Plan
- 1995 The agreement of the WTO markets for dairy products
- 2004 FTA Thai-Australia
- 2005 FTA Thai New Zealand
- 2008 The Dairy Cattle and Milk Products Act (National Dairy Board)
- The preparation towards AEC in 2015

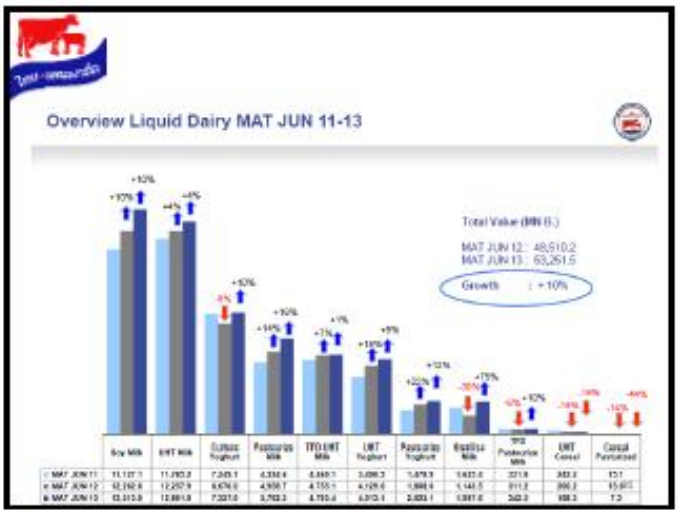
The Strategy of Thai Dairy Industry Development Plan

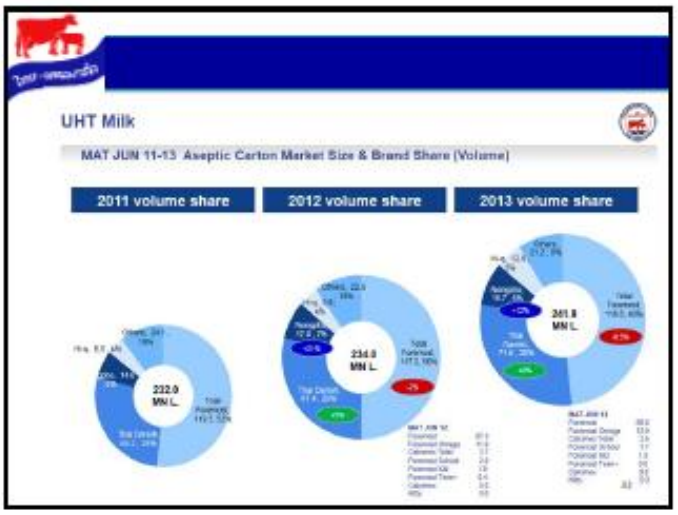
Vision	Strength of farmers for good future of dairy industry 2012-2016					
Strategy	1. Research and development on dairy farming	2. Develop and enhance farmers performance in milk producing	3. Promote milk consumption and develop milk product for competition	4. Increase efficiency of dairy farmer organization		
Mission	1. Research and development on dairy farming	2. Improve dairy breeding for enhancing production efficiency	3. Reduce cost of dairy production	4. Promote milk consumption and develop milk product for competition	5. Increase efficiency of dairy farmer organization	6. Improve database system
Goal	1. Increase milk yield from 12 kg to 16 kg/cow/day	2.Technology transfer to 20,000 farmer	3.Milk quality meet good standard criteria at least 80 %	4.Reduce cost for increasing profit at least 10 %	5.Increase milk consumption from 14 liters to 20 liters/person/year	6.Establish Dairy Board Office in 2016
KPI	KPI I % Good Agricultural Practice (GAP) farmer	KPI II % Raw milk of processed in to various milk products	KPI III % milk consumption in country that increasing each year	KPI IV % increasing farm profit	KPI V % export product that increasing each year	KPI VI Establish Dairy Board Office in 2016

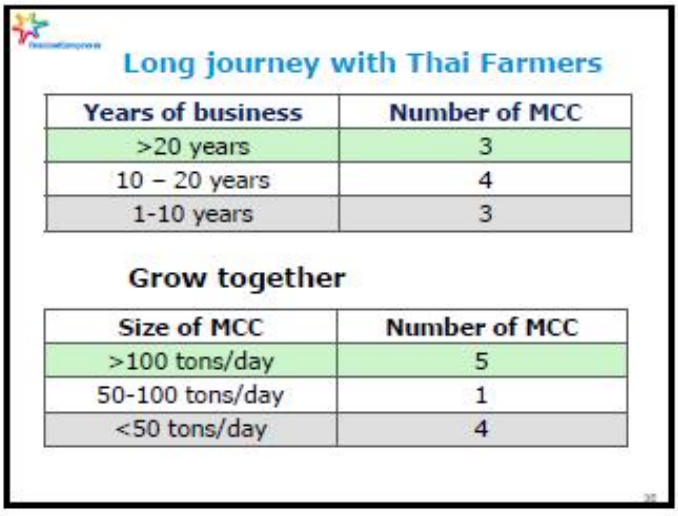
Dairy Farm Development in Thailand

	1980	1984	1988	1993	1998	2003	2008	2013
Dairy farm	2,269	4,447	8,396	15,933	17,259	23,080	18,710	20,624
Milk production (ton)	15,500	42,500	99,000	287,164	437,116	731,923	786,186	1,125,188
Dairy cows	na	na	na	224,007	323,254	392,625	493,893	589,017
Milk prod. kg/cow/day	na	na	na	8.15	9.03	11.26	10.21	12.30

Source: OAE,2013



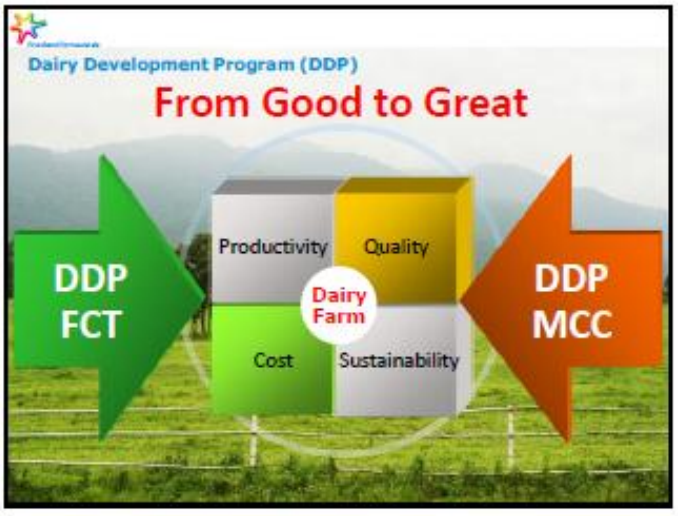




Years of business	Number of MCC
>20 years	3
10 – 20 years	4
1-10 years	3

Grow together

Size of MCC	Number of MCC
>100 tons/day	5
50-100 tons/day	1
<50 tons/day	4



Thailand
School Milk Program

Starting of School Milk Program In 1992

- Drinking milk was recommended by FAO.
- **The aim of the program :**

1) To improve children's health

2) To create milk drinking habits among children and youths, helping their physical and mental development

3) To encourage the use of raw milk from the government's Dairy Promotion Program

- Served 0.7 million kindergartens for 120 days
- Budget 9.3 Mil.USD/ year

Wind of Changes

- 1995 : Extended to grade 1 and for 200 days
- 2000 : Used only raw milk; no mixture of powdered milk
- 2001 : Budget transition to Ministry of Interior
  : Implemented one common design
  : Started zoning for sales and distribution
- 2001 – 2008 : be applied zoning and altered no zoning [free trade]

Wind of Changes : Y2009/ Y2010

Budget increased to 300/ 450 million USD
Extended to grade 6 and for 260 days

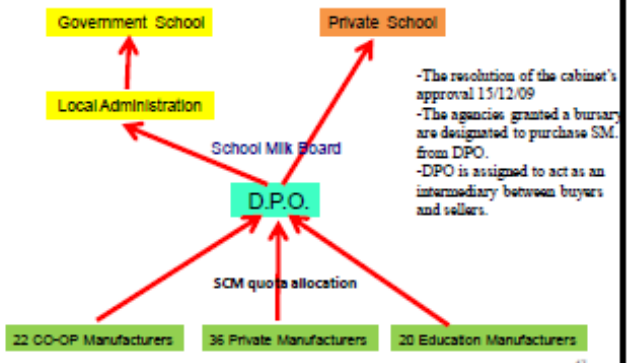
- High price Competition
- Selling price cut up to 40%
- Unethical manufactures did not buy raw milk from Thai farmers, used diluted powder milk.

Poor raw milk quality → Emphasize school milk quality
For students

Raw milk surplus → Raw milk allocation /MOU
For farmers

SCM quota allocation
Improve logistic cost, pricing, cash flow
For Producers

Every school must purchase school milk from D.P.O. only



Today : School Milk

100% Central government financial support

Ministry of Interior	Buyer for government schools
Ministry of Agriculture and Cooperatives	Quota allocation-raw milk and sales administrative
Ministry of Education	Buyer for private schools
Ministry of Public Health	Quality control &Product approval
Ministry of Industry	Production license

Today : School Milk

- Budget : 450 million USD/ year
  : 100% government support
- Students : ~7.6 million students
  : Kindergarten 1 – Grade 6
  : Government and Private schools
  : Nationwide
- Raw milk needed : 1,200 tons/ day
- Consumption : 1 unit of 200ml/ day for 260 days
- Improvement
  :Malnutrition dropped to less than 5% in 2006
  Child development higher than 50% in 2004
  Height at 5 cm a year compare to 2-3 cm at the 1st year

Today : School Milk

- Product : Fresh and white milk only
- Distribution : UHT carton 50% (actual ~40%)
  according to budget/student : PPP 50% (actual ~60%)

UHT

- 11 Manufacturers
- Convenience
- Long shelf life
- Lower logistic cost

Pasteurized

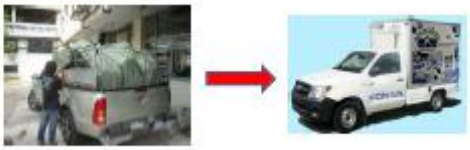
- 67 Manufacturers
- Chilled
- 16% Lower price

Price/ pack
Budget THB 7.00/ student
UHT - TBA THB 7.61/ pack
PPP - THB 6.37/ pack

Today : School Milk

New desing packaging

New transaportation



Today : School Milk

Emphasize quality

100 % GMP Manufacture

temperature control

100 % GMP Raw Milk collecting Center in 31 March 2013

Conclusion

- The Thai dairy sector has shown the continuing development in dairy farming and dairy industry, as significantly increased in the amount of raw fresh milk produced and dairy products.
- The government sector plays a crucial role on the policy formulation and implementation, those of which have resulted from the past to the present time.
- The public private cooperation is needed to enhance the factors affecting the competitiveness and sustainability of the Thai dairy sector.

"...Dairy farming is a good Occupation for the Thai people and Thailand. If applied with proper intelligence, it will lead to prosperous development and good income..."

A royal speech of His Majesty King Bhumibol Adulyadej
May 10th, 1988

Building Our Common Future

Milky Way Towards Healthy and prosperous
ASEAN Economic Community

Dairy Development in Myanmar

International Technical Symposium: Mauk Lek, Saraburi, THAILAND
18 January 2014

Dr. Khin Hlaing
Secretary General
Myanmar Livestock Federation

Cattle population

Cattle population- 10 million
Most of them are Drought Cattle.

Dairy Cattle- 100,000 No.
Common Dairy Breed is Friesian Crossbred.

Average milk Yield: 5 Kg per day per head

Almost 85 percent of milk is produced by smallholders

Source: MLF

Role of MLFRD and LBVD

- Government Myanmar has the commitment for people to reduce the poverty from 26% to 16% by 2015, through multi-disciplinary rural development plan.
- Ministry of Livestock, Fisheries and Rural Development (MLFRD) is one of the supporting bodies to improve the socio-economic status of rural people.
- Field staff of LBVD directly involved in providing technical service under the guidance of mother Ministry and Local Government.

The priorities of the MLFRD on dairy sector development

- Priority must be given to small scale dairy sector development
- Small scale dairy sector be targeted from community based system to Co-operative system
- Services for animal health and upgrading of breeds be improved to increase productivity of present herd
- Practical training and outreach training tailor made to improve small scale dairy farmers be encouraged
- Opportunity be created for SSD to have easy access to market and to get finance and technology from private sector
- School milk program be adopted to contribute to dairy development and long lasting milk demand
- Value added products such as ready to drink milk, yoghurt, and sweetened milk be promoted
- The quality of local products be improved to replace imported products

Feed inputs

- Commonly fed roughages are roadside grass, rice straw and dried bean stem and few medium scale (> 50 cows) farmers grow old Napier, Para, Guinea grass and some legumes
- SDDP introduced Napier Pakchong 1 grass to dairy farmers in 2011 and farmers liked and planted in their respective Regions and States in 2013 as they understand the effectiveness of good quality grass.
- Selected 12 distributor farmers had grown at least one acre each in three project areas supported by SDDP and they will further distribute Napier Pakchong 1 grass stocks to 240 farmers.
- Livestock Breeding and Veterinary Department (LBVD) encourages to make silage and also conducts silage making training in plastic bags.

Veterinary inputs

- LBVD extended its present organization structure and will pay more attention to extension services especially on small-scale dairy farming
- LBVD produces cattle disease vaccines; Anthrax, Hemorrhagic Septicemia, Black Quarter and FMD
- OIE contributed 300,000 doses of FMD vaccines in 2013 and LBVD vaccinated in three selected districts as targeted vaccination campaign. OIE already sent 500,000 doses for regular vaccination in 2014.
- Japanese government contributed 100,000 doses of FMD vaccine for Nay Pyi Taw Council in January 2014.
- KOICA from Korea gave assistance to construct FMD BSL2 Laboratory in Nay Pyi Taw. There is only one BSL2 diagnostic laboratory in Yangon.

Breeding inputs

- Ministry of Livestock, Fisheries and Rural Development is encouraging to in crease number of dairy cows through out Myanmar.
- LBVD distributes 100% frozen semen produced from proven bulls kept in AI department to dairy farmers free of charge.
- LBVD also supplies liquid Nitrogen to the dairy farmers free of charge.
- LBVD conducted laymen inseminator trainings in State and Regions and distributed dairy type cross bred grower bulls to some area where AI can not available.
- Two private companies and CP imported frozen semen from New Zealand, United States and Thailand and distributed to the farmers.

Governance

- According to the Animal Health and Development Law, dairy farms having 20 and above must register at Township LBVD; 10 Kyats per head per year as registration fee.
- FDA issues food production recommendation certificate after checking the processing plant and products.
- Ministry of Commerce controls the importation of dairy products from foreign countries.
- LBVD already issued Good Husbandry Practice (GHP) guide line for dairy farms in 2013.
- LBVD is drafting a specific regulation on milk testing standard.

National Dairy Development Board

- National Dairy Development Board (NDDB) was formed in late 2012 in Myanmar.
- Deputy Minister for MLFRD acts as chairperson and senior officers from MLFRD and five MLF members are members of the NDDB.
- NDDB supervises the dairy development activities together with MLF (MDA) as Public Private Partnership.

Dairy Production

- In 2011-2012, Myanmar produced about 0.78 Million tons of fresh milk.
- Per capita consumption of milk was 10 Kg in 2012
- Sweetened condensed milk is produced in large quantities and mainly produced in Mandalay and Sagaing Divisions.
- Processors in Yangon Region produce pasteurized milk, Yoghurt, butter, butter oil and small amount of cheese.
- Dairy production is not meet local consumption and imports dairy products from abroad every year.

Source: MLF

Yearly statement of imported dairy products into Myanmar

Year	MP (MT)	SCM/EM (MT)	Total Volume (MT)	Total Value (Million $)
2007-2008	6046.81	33082.75	39129.56	35.94
2008-2009	1604.38	36317.71	37922.09	41.03
2009-2010	5115.01	38154.68	43269.69	45.91
2010-2011	1824.73	11993.95	13818.68	47.94

MP : Milk Powder
SCM: Sweetened Condensed Milk
EM : Evaporated Milk
MT : Metric Ton

Source: Ministry of Commerce

Milk Consumption Habit

- Myanmar people like to take milk in the form of tea or coffee.
- Urban population take more milk than rural people.
- Milk in tea and coffee is from condensed milk (Imported or local).
- Milk products in Myanmar are pasteurized milk, yoghurt, butter, butter oil, cheese, dry flakes of milk, ice cream etc.
- In addition, milk is used in a large quantity in confectionaries such as biscuits cookies and a variety of cakes.

Milk Collecting Centers (MCC)

- There is no dairy cooperative in Myanmar.
- Milk collecting centers run by dairy processors collect milk every day from farmers and milk collectors.
- International dairy expert visited MCCs two times during SDDP period and taught milk testing and demonstrated hygienic MCC guide lines .
- After the study tour in Thailand, processors realized more about milk safety and have implemented mini-laboratory in MCCs.
- According to the microbial data analysis, TBC is more important than SCC in Myanmar.
- MCCs practice incentive payment system based on milk composition or Resazurin Test result.

Myanmar dairy study tour to New Zealand

- From 17 to 24 August, six Myanmar dairy experts travelled to New Zealand as part of New Zealand – Myanmar dairy activity, supported by the New Zealand Aid Programme.
- The delegation visited Lincoln University, Massey University, Tarataki Farm Training Institute, milk supply dairy farms, milk processing units and dairy equipment companies
- The study tour broadened the participant's understanding of the New Zealand dairy industry and the strengths behind its success (e.g. the farm system approach, low cost production, etc.)
- Many areas of relevant New Zealand expertise were identified that will be applied in Myanmar through the new project.

School Milk Programme

- School Milk Programme launched on16 July 2012 under one of the activities of SDDP supported by FAO Regional and CFC.
- The programme is being implemented by the FAO RAP with the support of Ministry of Livestock, Fisheries and Rural Development and Myanmar Livestock Federation.
- FAO provided technical knowhow, some equipments and financial support to Myanmar Livestock Federation (MDA) to implement School Milk Programme in Myanmar.
- Each of 11600 primary school children in Mandalay and Yangon Region is receiving free delivery of 200 ml of pasteurized or sterilized milk once a week from local smallholder dairy producers and well wishers.

School Milk Programme

- Tetra Pak/LBVD pilot scheme also distributing imported UHT milk (180 ml) each to 45,000 students from Nay Pyi Taw Council, Mandalay Region and Yangon region.
- CP Company contributed UHT milk to the students from Kayah State and Chin state.
- Nestle Company will contribute three in one Milo to 10,000 students from Yangon Region.
- Apart from project area, other townships in different Regions and States are interested and implement their School Milk feeding by their own way.

World School Milk Day

- The World School Milk days were celebrated 2 times in Nay Pi Taw, Yangon, and Mandalay with full gusto and with very high level participation of government and non-government partners and FAO representation by the financial support of FAOR.
- A number of activities were also organized on the occasions in three project cities. These included cultural pro-grams by school children & local celebrities and painting & drawing competitions.
- Small and medium private milk processors and well wishers donated cash and free milk to schools for the celebrations.
- With financial contributions from local dairy processors, Myanmar Dairy Association has set up a trust fund to support these activities.

Recommendations

- Milk needs to be safe through modern technologies & equipment
- Sustainable School Milk Scheme through involvement of multi-sectors
- National dairy policy is expected to be materialized soon

*DAIRY DEVELOPMENT IN VIETNAM

Viet Nam Dairy Association
Viet Nam Dairy Joint Stocks Company (Vinamilk)

*Vietnamese population ~ 90 million people (2013)
*GDP 2013: ~1,900 USD ~ 158 USD/month/person

*Not developed in the past.
*The breeding and milk processing industries have just been formed since 1960, and really developed since 1986.
*At the beginning, the scale was very small, considering in quantity, facilities and categories.

*Viet Nam Dairy Industry History (1)

*Thao Nguyen (Moc Chau) - only one national breeding and milk processing company in the North of Vietnam.
*The Southern Coffee-Dairy Company was established in 1976. It was renamed United Enterprises of Milk Coffee Cookies and Candies I. The breeding areas were gathered in Duc Trong (Lam Dong), Moc Chau (Son La), Ho Chi Minh city and Ba Vi (Ha Noi).

*Viet Nam Dairy Industry History (2)

*There are two ways of breeding herds:
- Mass in farm
- Scattered by farmers: company helps capital, technology and ensures the consumption of raw milk.
- The main breed is HF (Holstein Friesian), imported from Australia, which produces 25 liters of raw milk/day

*Dairy Herds

Year	Milk product (liter)	Milk consumption (liter/person/year)	Raw milk (liter)	
			For production	% needs
2013		15		
2015	1.9 billion	21	660 million	35
2020	2.6 billion	27	1.0 billion	38
2025	3.4 billion	34	1.4 billion	38

*Milk Consumption

Year	Dairy herds (number of cows)	Growth rate (%)	Milking cows (%)	Productivity of milk commodity (liter/cycle)	Milk capacity (liter)
2001	64,703				
10/2013	186,388				456,392,000
2015	350,200	9.5	45	4450	701,200,000
2020	500,000	7.4	45	4500	1,012,500,000

*Dairy Development in Viet Nam (1)

*There are 72 dairy companies, located in 19 provinces, production capacity per year:

- 796.2 million cartons of sweetened condensed milk
- 101.5 thousand tons of milk powder
- 778.3 thousand tons of pasteurized and sterilized milk
- 150.8 thousand tons of fermented milk

*Dairy Development in Viet Nam (2)

*Vinamilk and Friesland Campina Viet Nam Company occupy the significant production capacity in the dairy industry:

- 87.26% of sweetened condensed milk
- 76.45% of milk powder
- 75.29% of pasteurized and sterilized milk
- 75.59% of fermented milk

*Dairy Development in Viet Nam (3)

*2005: Friesland Campina Viet Nam company was invested the most modern bottling line of the world.

*2008: Nutifood company was invested the newest production line of milk powder from WOLF (Germany).

*4/2013: Vinamilk developed one more Viet Nam Milk Powder factory with high-end equipment. Its capacity is 54,000 tons milk powder/year. The facilities were equipped from GEA (Germany).

*Dairy Development in Viet Nam (4)

*In 9/2013, Vinamilk inaugurated the new factory, known as Viet Nam Milk Factory. It has an annual capacity of 400 million liters of milk in the first phase and 800 million liters of milk in the second phase.

*Dairy Development in Viet Nam (5)

*School milk as a catalyst for development of not only children's health and education but also of the whole dairy sector and the economy at large.

*Vinamilk has been the active partner in milk supply for school milk in many provinces (Ba Ria – Vung Tau, Bac Ninh…).

*School Milk Program (1)

*The Ba Ria - Vung Tau school milk program started in 2006 and today cover over 48,000 3-6 years old children.

*Besides, Vinamilk also joins Bac Ninh school milk program in 2013 and is ready for the next program in 2014 – 2016.

*School Milk Program (2)

*Vinamilk Products