

**Improved Market Access and Smallholder Dairy Farmer Participation
for Sustainable Dairy Development**

APHCA/CFC/FAO project CFC/FIGMDP/16FT

**Asia-Pacific Smallholder Dairy Strategy Workshop
Chiang Mai, Thailand, 25-29 February 2008**

**Session 1 Paper: Enterprise-driven Dairy Development:
Case Studies from the Philippines' Smallholder Dairy Sector (Slide 1)**

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This presentation consists of: (1) a brief description of the Philippines' milk market, (2) highlights of four cases with a focus on enterprise elements as applied in one case and (3) the development strategies and activities recommended for improved market access by smallholder dairy producers.

Market overview (Slides 2 to 4)

The Philippines' milk production in 2006 was equivalent to half a day's milk production in India in that year. The daily milk production in the Philippines is easily produced by a single dairy farm in Florida or California. With an annual milk production of 13 million liters or barely 36,000 liters per day, there is hardly an industry to speak of, in terms of production.

However, milk consumption tells a different story: the Philippines represents a sizeable and growing dairy market generating annual sales of milk and milk products worth some one billion US dollars. It is the 2nd biggest country destination of New Zealand's exports of milk and milk products. At its highest in 2005, liquid milk consumption was 25 times the consumption level in 1991. On a daily basis, this was 125,233 liters per day, from 5,424 liters per day in 1991. This, however, would appear as a flat growth rate when compared to China's milk consumption that doubled in the last five years. In the Philippines, the growing preference for natural food figures as a dominant demand driver rather than a fast growing mass purchasing power for milk and milk products. Nonetheless, Table 1 is attached to provide the basic indicators of the Philippines' dairy industry.

Notwithstanding a demand situation that is slower in comparison with emerging Asian dairy markets, the rising world milk prices visibly perked up small milk producers' edge in the direct consumer market as well as in the food service and industrial use market.. Higher milk import prices already neutralized by a stronger peso resulted in more competitive price levels. .Specifically, a liter of UHT milk which sold for P54 (US\$1.12)

in 2006 is priced at P65 (\$1.59) in 2008 compared to fresh milk prices that averaged about P60 (\$1.43) over the same period. Bulk pasteurized milk for food service outlets and industrial users also started to explore the use of local fresh milk following the improved price difference.

Who are the smallholder dairy producers of the Philippines? (Slides 4 to 5)

The Philippines' dairy industry consists of two distinct sectors. One is the milk powder based sector that imports, re-processes and repacks milk and milk products. The other is the liquid milk sector that has its imported UHT milk component and the locally – produced fresh milk component. It is only in the liquid milk sector that smallholders figure in the industry.

The last survey of dairy enterprises conducted by the Bureau of Agriculture Statistics in July 2002 covered 4,957 dairy farmers in cattle, carabao and goat farms. Of these, 85 percent (4,194 farmers) owned from one to four dairy animals while another 11 percent (564 farmers) owned 5 to 10 dairy animals. Hence, unorganized small dairy farmers and smallholder milk producers, together, comprised some 96 percent of the local dairy farming sector.

Three dairy enterprises, selected for the high degree of smallholder participation, have been identified as the initial source of data in a value chain analysis of the Philippines' dairy sector. These are the Katipunan ng Kooperatiba ng Maggagatas, Ink, (KKMI) in Calauan, Laguna in Luzon island, the Federation of Davao Dairy Farmers Cooperatives (FEDDAFC) in Malagos, Davao City in the island of Mindanao, and the Kapanig Multipurpose Cooperative in San Juan, Siquijor in the Visayas. A fourth one, the carabao development program of the Philippine Carabao Center in its National Impact Zone in Nueva Ecija is, likewise, profiled to showcase buffalo-based dairy enterprises.

The full presentation includes slides on the highlights and winning features of each case. However, the discussion below is focused on one case to better illustrate the business features applied by a smallholder-based dairy enterprise.

Federation of Davao Dairy Farmers Cooperatives (FEDDAFC) (Slides 6 to 7)

This plant started operation in 1990 under the direct management of the coop federation, FEDDAFC. Starting with four founding primary coops, it is now composed of 13 primary cooperatives of about 200 farmers. It processes an average of 1,100 liters of milk daily. Operating results of the plant had been up and down for most of the years depending on the trustworthiness of the plant manager. The federation has hired professional managers who have come from bigger firms and has also designated from among the farmer board members as General Manager. FEDDAFC has been the victim of numerous funds misappropriation. NDA has actually taken over management of the plant in the past. But the take over two years ago involved a change, not only in management, but of plant ownership as well.

FEDDAFC's Turnaround and the Interplay of Competitiveness Factors (Slides 8 to 10)

Towards the end of 2005, this plant was declared delinquent for failing to pay its farmer suppliers for raw milk delivered over three months. The **lease contract** with the NDA for the use of the plant includes a clause for automatic take over by the NDA in case of non payment to farmers for at least two months. NDA implemented this provision and completed the turnover of the plant from the coop federation to the NDA after a series of general assembly meetings where all members were informed on the consequences of such a takeover.

The assets of the enterprise were valued and the NDA took its **equity share** in the enterprise. The dairy federation ended up holding a minority share of 21 percent in the new entity which took on the nature of a public-private venture.

With the takeover, the General Manager (GM) designated by the NDA had to deal with a workforce that was wary if they would be retained under the new management. The staff transition to new assignments was handled adequately although not without intense pressures at the start, particularly on the GM.

There were suppliers to be paid, farmers waiting for milk payments, bank accounts to be validated and a market to put in shape. To the credit of the GM and her team, these matters were handled one by one and the plant slowly assumed a new dynamism.

Within the first year of the takeover (2006), the enterprise realized a net income. The profitability was sustained into the second year (2007).

The Davao Milk Plant has initiated various other schemes that contribute to its good enterprise performance. In particular, the development of its **network of 29 dealers** of frozen milk products has stabilized the market for 43 percent of its product mix. The dealers pick up the goods from the plant significantly reducing delivery costs. In turn, the dealers distribute the frozen milk bars to their own network of variety stores and school canteens. The Plant Manager who is also the General Manager meets with the dealers regularly to enforce the delineation of the area of coverage of each dealer and avoid unhealthy competition. This product line, developed in the last two years, has greatly reduced the dependence of the plant on school milk feeding as a market.

Customers in Davao City have associated fresh milk with the brand Davao Dairy Best. **Brand recognition** is acknowledged that is why the enterprise pays the coop federation a royalty for the use of the brand. It is designed in an attractive format that allows it to compete on the supermarket chillers side by side with other commercial milk brands. The General Manager realized soon enough that supermarket sales can be profitable as long as the documents for collection of accounts are prepared promptly and served to the supermarkets regularly.

The plant has also installed a **milk payment system** that pays an average of P2 on top of the base price of raw milk. The plant quality assurance staff visited individual dairy farms to demonstrate milk collection procedures. Milk collected is then tested for compliance. The first round of tests was done without any charges to the farmer. However, when they fail and subsequent tests are required, the farmer has to pay a testing fee.

The Davao Plant maintains a sales force that is paid on a **commission basis**. Instead of keeping a regular sales force, the team sells milk in particular residential areas and gets compensated based on volume sold. The system has improved sales and reduced overhead for the enterprise.

Organizationally, this first attempt at a public-private venture is stimulating the imagination of the players. They are currently in discussions on how to maintain the discipline installed through the new organizational setup while increasing the equity of the farmers and possibly, the plant team, in the venture.

The entry of a **foreign investor as a new player** in the dairy zone represents both a shift in factor conditions (more animals, new farm infrastructure) as well as an enhancement of competition within the zone. Instead of being considered a threat, the new player stimulates good milking practice among the farmers who would not want to be outdone by the newcomer. Aside from this, the Korean investor has been a source of some farm equipment made available to the farmers in exchange for a young calf or a heifer.

The pressure on land use, however, is a factor condition challenge to the Davao dairy zone. Plantations of high value crops compete with use of land for dairy purposes. Many smallholders are either tenants or leaseholders who usually have to give up the land when the landowner decides to shift the use of the land to a fruit orchard or to lease the land to a corporate farm.

On the other hand, young, **second-generation dairy farmers** are taking over and improving the existing dairy farms. Anthony Naraval is an example of the new batch of dairy farmers who are keen on engaging in dairy as an entrepreneur. The crop of young dairy farmers represents an enhancement of factor conditions in the dairy zone. Having fully paid their previous animal loans, they are preparing to acquire additional animals to increase their dairy herd.

FEDDAFC, as a federation, continues to suffer from weaknesses in leadership. Its officers seek to buy back the plant but there are no assurances that the problems of the past will not recur if this happens. The tension between the objective of establishing a viable enterprise and the traditional drive to put all operations in the hands of smallholders is playing out vividly in this situation. All the parties involved – the NDA, the cooperatives, the plant staff – will all interact to shape a suitable enterprise structure that will effectively protect the gains of the enterprise while ensuring the maximum benefits to smallholders. The settlement of this issue reflects the interplay of enabling

government support through the NDA as lead organizing institution and the governance structure of the cooperative and its capacity to discipline its ranks.

Katipunan ng Kooperatiba ng mga Maggagatas, Ink. (KKMI) (Slides 11-15)

Kapanig Multipurpose Cooperative – Siquijor Islang Dairy (Slides 16-19)

Carabao Dairy Program – National Impact Zone (Slides 20-22)

Two Value Chains and Cost of Milk Production (Slides 23 to 25)

Dairy Development Strategies and Lessons (Slides 26 to 31)

During the validation meeting with industry players, the following activities were recommended: the holding of regular farmer-to-farmer visits and exchange of farm practices among smallholder dairy farmers, the formulation of feed rations for dairy zones with the appropriate feeds testing and milk yield monitoring, the gearing of areas with limited markets for milk as suppliers of dairy stocks, encouraging the establishment of breeding enterprises among AI technicians at the village level, formalizing popular calf rearing and growing arrangements at the coop level and the enhancement of coop-based lending programs.

Other lines of action that have been considered following discussions with model enterprises are the following:

1. **Establishing common facilities along the value chain: for feed testing, for herd recording, for laboratory testing of milk, label and package design, business and label registration.**

The common facilities may be distinguished from government extension work in that dairy enterprises themselves could contract the delivery of common services at fees based on business results traced to the services accessed. Some examples may be increase in milk yield due to regular feed testing, improved calving interval due to herd recording, longer shelf life due to laboratory testing, increased sales due to improved product label, etc.

2. **Toll processing:** improved toll processing arrangements can broaden engagement of smallholders and increase their share in final product margins. It can also reduce working capital burden of processing plants and help balance production and use of milk throughout the year. New players, from among smallholders' families, may participate.
3. **Management training:** smallholders need professional help but qualified and honest managers are not easy to find. Firm-level content of conferences may be given more emphasis so that discussions can focus on business matters. Exchange activities may also include small exhibits of equipment and packaging

materials that may be useful for farms and plants. Here, successful smallholders and plant managers may be invited as resource speakers. Successful smallholders may be tapped as on-farm trainers.

4. **Designs for making local markets work:** sponsored school milk feeding, product positioning at key outlets, targeted public taste tests, monitoring of customer feedback.
5. **Dairy business process outsourcing:** some administrative support services may be initiated on an outsourced basis such as the collection of receivables, preparation of regular financial statements, executive search and training.
6. **Identification of technical and enterprise performance indicators that smallholders can compare with one another.** Some of these indicators may be the milk yield per kilogram of concentrates fed to the lactating animal, calving interval, milk payroll, cost to produce a liter of milk and similar measures.
7. **The conduct of comparative cost and return analysis for dairy and alternative crops.** This study would enhance the enterprise awareness of farmers who can be introduced to the concept of opportunity costs and comparative investment options.

Prospects for enterprise-driven dairy development

There are strong indications of accelerated growth in the Philippines' dairy sector. Most prominent of these signs is the maturing of enterprises that have established their market networks and are able to invest in expansion without relying, solely, on government support. These are the building blocks that provide the foundation of the industry. The same enterprises represent individual dairy producers who have "learned the ropes" and are realizing the gains from the industry. Ultimately, it is the concrete benefits that would make the players remain in the industry.

The profitability of these enterprises, in turn, has been attracting new entrants that may yet provide the needed "critical mass" for the industry to move ahead, gaining more credit support and a more conducive policy environment.

Even government that has historically provided wavering support is poised to allocate more assistance for herd buildup, breeding infrastructure and common facilities. The big challenge is to evolve the suitable enterprise designs that will maximize smallholder participation in the value chain.

Table 1. Philippine Dairy Industry Indicators

Indicators	1995	2000	2005	2006
Annual milk prod'n in million liters	12.11	10.21	12.34	12.87
Total dairy herd	21,054	21,100	26,344	28,395
Cattle	11,145	7,780	11,733	13,092
Carabao (Buffalo)	8,134	11,943	13,606	13,648
Goat	1,775	1,377	1,005	1,655
Total dams and does	9,687	10,254	12,679	13,255
Cattle	5,543	3,550	5,210	5,669
Carabao (Buffalo)	3,360	5,950	6,820	6,879
Goat	784	754	649	707
Dairy import cost (CIF - in US\$ million)	438.29	402.17	421.33	457.30
Dairy import volume ¹ in LME (in million liters)	1,605.14	1,853.16	1,353.39	1,510.68
Per capita milk intake in liters per year	16	16	19	19
Number of farm families engaged ²	4,066	8,197	13,077	14,347
Total employment in the dairy industry	4,066	8,197	17,020	19,583
Number of dairy enterprises	58	118	289	315
Number of children supplied in milk feeding programs	12,750	20,932	96,167	29,843

¹Import volumes are net of re-exports by importer-processors.

² First survey of farmers engaged in dairy was conducted in 1996 by the Bureau of Agriculture Statistics.