



Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Voluntary Report - public distribution

Date: 5/7/2003

GAIN Report #CH3814

China, Peoples Republic of

Dairy and Products

China's Dairy Industry Overview

2003

Approved by:

Scott S. Sindelar

U.S. Consulate General, Shanghai

Prepared by:

Christina Wu

Report Highlights:

China's dairy industry has blossomed from near non-existence to register over US\$3 billion in annual sales since the early 1980s. But China's inferior production methods, complex demography, immature distribution network and post-WTO regulatory environment pose challenges for both domestic and foreign companies. As tariffs continue to drop, foreign parties will play a greater role in China's dairy production, and the dynamics of the industry will continue to change.

Includes PSD changes: No
Includes Trade Matrix: No
Unscheduled Report
Shanghai ATO [CH2], CH

TABLE OF CONTENTS:

SECTION I. Market Overview

SECTION II. China's Dairy Supply Chain: Lengthy and Inefficient

SECTION III. Chinese Consumers: Building a New Dairy Culture

III.1. Lactose intolerance

III.2. Urban children: Key marketing target

SECTION IV. Distribution: Varied and Complicated

SECTION V. Imports and Market Access

V.1. Foreign players in the dairy market

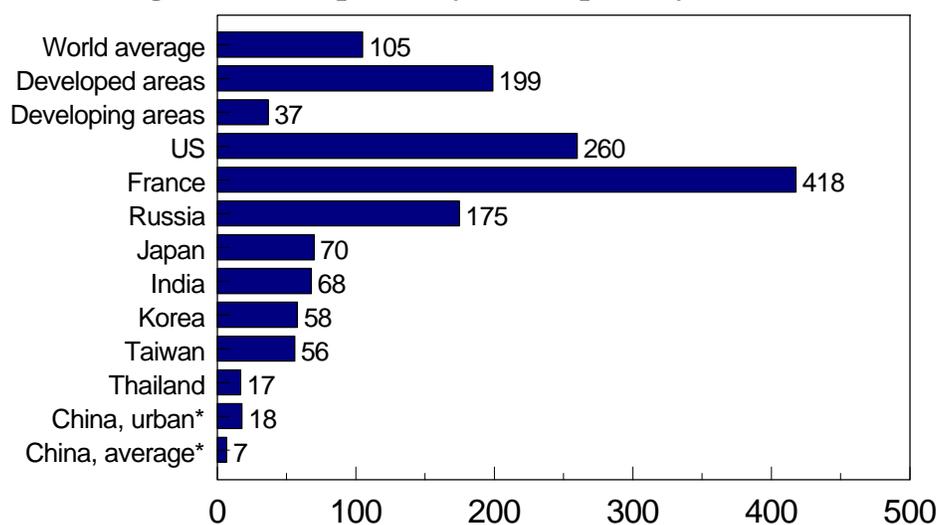
V.2. WTO tariff cuts and impact on domestic dairy industry

SECTION VI. Key Contacts

SECTION I. Market Overview

Over the past 20 years, China's dairy industry has blossomed from near nonexistence to boast more than US\$ 3 billion in annual sales. Although traditional tastes and cuisine do not include the use of dairy products except as a supplemental nutritional product, contemporary China's urban and increasingly westernized population is increasing its appetite for milk and other dairy products. According to figures published by the Ministry of Agriculture, dairy consumption has grown over 10% each year for the past three years. However, Chinese per capita dairy consumption ranged somewhere between just 7 and 9 kg in 2001, far below the worldwide average of 105kg (see **Figure 1** below). And according to the National Dairy Council, in 2001, Americans consumed about 91 liters of milk per person, while the average Chinese person consumed less than four liters. While per capita figures in China are usually misleading, the extremely low averages associated with dairy consumption provide a rough idea for potential growth.

Figure 1: Per capita dairy consumption by area, 2000



* in 2001

Source: Rabobank International, 2002

The rapidly growing but still underdeveloped market poses opportunities and challenges for both foreign and domestic companies. Four major factors determine the growth pattern of China's dairy industry. First, China's inferior methods of domestic milk production hamper efficiency and quality. Dairies need to consolidate and improve supply chains if they are to fulfill the market's potential. Second, the distinction between urban and rural consumers determines where opportunities for foreign companies exist and with what types of products. Additionally, many Chinese are lactose intolerant, so companies must build up tastes and tolerance for their products. Third, China's complex distribution network for dairy products, while tenuous, presently functions well on its own and leaves little room for new foreign players. However, the expansion of the dairy industry will require a more sophisticated cold-chain distribution system and thus may elicit the need for foreign cold-chain distributors. Finally, although the uncertainties of the market have created difficulties for many foreign companies, factors including post-WTO tariff rates, increased product awareness and improvements in distribution will improve the foreign investment

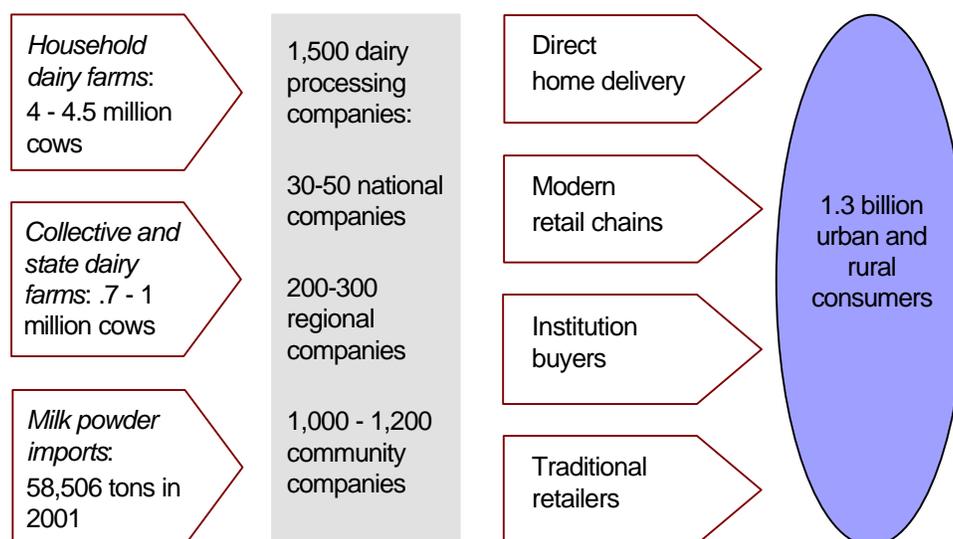
environment for the dairy industry. New industry dynamics have also spurred the Chinese government to invest in revamping production and increasing consumption.

SECTION II. China's Dairy Supply Chain: Lengthy and Inefficient

In 2001, 87% of milk production took place in the north, west and in metropolitan regions such as Beijing. Northern China still dominates dairy production, but production is gradually shifting to other locales, such as Sichuan and Xinjiang. Lack of high quality cows is another problem; only half of the national herd are pure dairy cattle, such as Holstein. The remaining cows are local cross-breeds. Most farmers cannot afford to purchase even a locally-bred Holstein cross, which costs around RMB1500-2000 (US\$181-242).

Many of China's agribusiness supply chains are long and cumbersome, and the dairy supply chain¹ is no exception. Raw milk production comes from three main sources (see **Figure 2** below). According to Dutch investment bank Rabobank International, about 70-80% of raw milk production originates from small household farms, which typically have three to five cows each. Collective and state-owned farms with around 200 cows per farm contribute to about 10-20% of total milk production. In addition to household farms and state farms, there has been an increasing number of privately owned farms, with around 100 cows per farm, but their role in production overall remains minor. Imported whole-fat milk powder (WFP) and skim milk powder (SMP) serve as an important supplement to the domestic raw milk supply as well as a source for yogurt and ice cream makers.

Figure 2: China's Dairy Supply Chain



To collect Source: Rabobank International, 2002

milk

¹Because Chinese cheese consumption is still extremely low, until otherwise specified, the terms "dairy industry," "dairy production" or "dairy supply chain" should be taken to mean those for raw milk.

from the thousands of household, state-owned or private farms, processors go through collecting stations or purchase it from "middleman" agents. The three types of processors of raw milk include metropolitan companies, regional producers and community companies.

Processors then deliver the product through a multitude of distribution channels. The method of distribution depends on the location, type of product and characteristics of the consumer market. For instance, home delivery has proven to be the dominant mode of transport for pasteurized milk, which has a shelf life of one to seven days. Supermarkets, hypermarkets and other fast-growing retail outlets dominate the sale of milk powder, while street kiosks (*xiaomaibu*) and convenience stores serve as popular sales outlets for perishable dairy products such as yogurt and ice cream.

SECTION III. Chinese Consumers: Building a New Dairy Culture

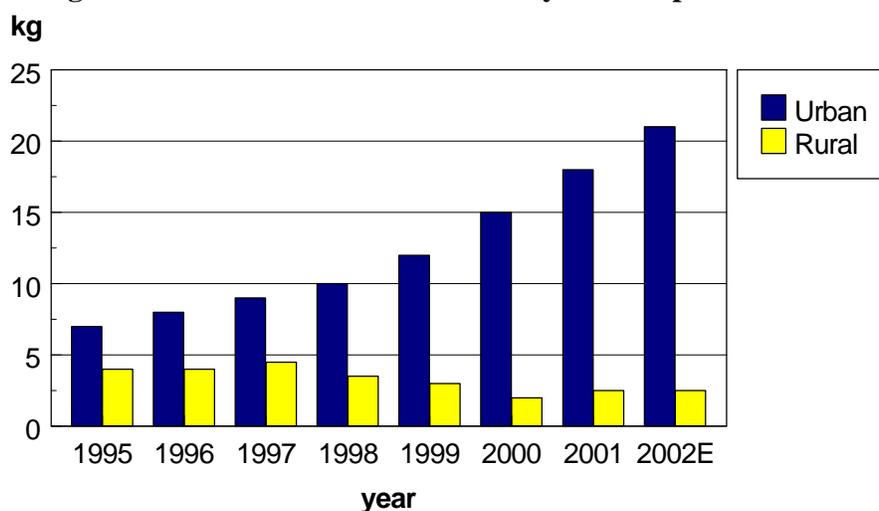
III.1. Lactose intolerance

Despite rapid growth in production and urban dairy consumption, significant obstacles to the widespread popularity of milk remain. The fact that many Chinese have an inability to digest lactose, the natural sugar found in milk, has meant that companies have had to introduce easier-to-digest products. Successful companies are tailoring production to appeal to the tastes of young and increasingly lactose-tolerant urban consumers. For instance, yogurt-based drinks, which some people find easier to digest, have been particularly successful for both Chinese and foreign companies. Yogurt made by Shanghai Bright Dairy & Food (*Shanghai Guangming*), China's largest dairy producer, is a common snack or breakfast item for students and young professionals. (In 2002, Shanghai Bright registered more than RMB 3 billion (\$362 million) in sales and listed on the Shanghai Stock Exchange.)

While there are no official estimates on the number of lactose intolerant people in China, the number is thought to be high but probably decreasing with the gradual introduction of dairy products and ingredients into the (particularly, urban) Chinese diet.

III.2. Urban children: Key marketing target

Consumer groups vary widely in China, and the distinction between urban and rural consumption of dairy is stark (see **Figure 3** below). For China's urbanites, drinking milk and yogurt is a daily habit that is associated with good nutrition, health and prosperity. The novelty of dairy as a healthy part of the diet has taken hold in major cities, and the majority of Chinese dairy consumption takes place in metropolitan areas. In rural areas, where approximately 70% of the population lives, milk is still seen only as a supplemental product for infants, the sick or the elderly. Dairy consumption in rural areas remains extremely low. The Dairy Association of China estimates that rural residents, who make up about 70% of the population, drink only about one-third a gallon of milk per year.

Figure 3: China's Urban vs. Rural Dairy Consumption

Therefore Source: China Statistics Yearbook, Rabobank International estimates dairy companies are focusing their efforts on Chinese urbanites and their children. For example, Shanghai Bright has diversified its strategy from focusing merely on one product (whole milk) to offering an array of products varying from aloe- or blueberry-flavored yogurt to chocolate milk. Providing consumers with more options not only develops young consumers' tastes for dairy but also increases awareness and understanding of such products as fun and nutritious. Shanghai Bright also launched a national advertising campaign, which appointed China's Olympic diving champion Tian Liang as the company's public face - a move that further connects dairy products with the concepts of health and vitality in the minds of China's younger generation.

Another creative marketing strategy belongs to Uni-President, a subsidiary of President Enterprises Corporation, one of Taiwan's largest dairy and food companies. Rather than vying with top domestic fresh milk makers such as Shanghai Bright and Beijing Sanyuan (see **Figure 4** below), Uni-President is focusing on promoting malted milk and other flavored milk drinks aimed at children in prosperous but less high-profile cities. Uni-President's strategy might provide insight into the overall acceptance of dairy drinks among Chinese youth. Free supermarket tastings and toy giveaways help attract young consumers.

Figure 4: China's Top 10 Domestic Dairy Enterprises in 2001

1. Shanghai Bright	3,052
2. Inner Mongolia Yili	2,650
3. Shijiazhuang Sanlu	2,350
4. Heilongjiang Wandashan	980
5. Beijing Sanyuan	800
6. Inner Mongolia Mengniu	720
7. Heilongjiang Dairy	690

8. Xian Yingqiao	550
9. Zhejiang Junyao	530
10. Heilongjiang Jinxin	490

Value: RMB million

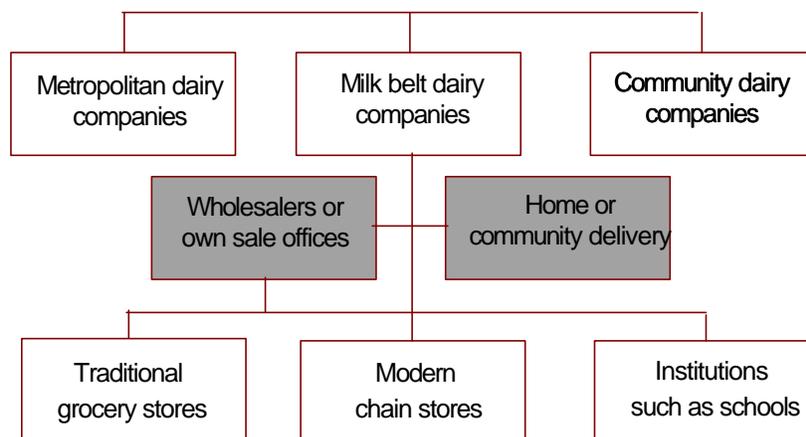
Source: Documents of the 8th Annual Meeting of the China Dairy Industry Association, September 9-12, 2002, Rabobank International

Besides children, adults are incorporating dairy into their consumption habits as well. For instance, milk and yogurt drinks are becoming popular beverages at banquets. With many dairy ads boasting cures for everything from germs to dental hygiene problems, many adults have also caught onto the message that dairy is healthy.

SECTION IV. Distribution: Varied and Complicated

The lack of a reliable cold-chain transport system throughout most of China serves as another reason why fresh milk consumption is mainly limited to large metropolitan areas (see **Figure 5** below). The scale and complexity of urban infrastructure serve as natural barriers to market entry and most foreign companies would fare poorly in the home delivery market. Despite the gradual development of modern retail channels, the home delivery system still dominates the distribution market for pasteurized milk, which has a shelf life of 1-7 days. Shanghai Bright delivers two million bottles of milk daily, compared to just 1,800 per day five years ago, when the service was launched. The company also operates a 24-hour hotline to take orders and offer customer service.

Figure 5: Sketch of dairy distribution systems



Factors such
and familiarity

Source: Rabobank International, 2002

as cheap labor
with city streets

and local logistics help ensure the success of home delivery systems of domestic giants like Shanghai Bright. Customer satisfaction with product freshness, affordability and convenience have encouraged companies to expand their range of delivered products to include fruit juice and yogurt. E-commerce websites have further facilitated delivery schemes and increased efficiency.

According to Rabobank, for non-perishable items such as UHT milk and milk powder, producers rely on wholesale distributors for delivery of their goods. These third-party distributors operate at provincial, prefectural and national levels, and working with them effectively has proven to be a major challenge for dairy producers, especially for foreign companies. As distributors often carry leverage to push for the use of certain products, having a technically educated distributor who will fight for your product (imported or domestic) is beneficial. For instance, the US Dairy Export Council (USDEC) is spearheading an effort to provide technical training for local distributors to encourage the use of US dairy products in the Chinese diet and cuisine.

Dairy producers also deliver directly to large retail chains. Although retail chains charge high fees for shelf-space, and competition among producers is fierce, dairy companies value the high-quality image associated with display at modern retail chains, and many major companies insist that selling in such retail chains is vital to their success.

SECTION V. Imports and Market Access

V.I. Foreign players in the dairy market

Over the past several years, the foreign presence in the dairy industry has been maintained by a small handful of leaders (see **Figure 6** below). Notably, after the mid-1990s, the US market share of dairy ingredients in China fell considerably, and in 2002 stood at around 12%. According to USDEC, factors for the loss of market share include the lack of adequate distributors, tariff structures and misconception of quality standards. A small handful of European countries have strengthened the EU's position as the net leader of Chinese dairy imports, while New Zealand and Australia continue to occupy about 50% of the market alone.

Figure 6: Top Five Suppliers of China's Dairy Imports

Country	2001 (mn USD)	2002 (mn USD)	% Share 2001	% Share 2002
1. EU	9.88	12.31	28.75%	33.70%
2. New Zealand	12.72	11.93	37.00%	32.63%
3. Australia	7.23	6.48	21.05%	17.73%
4. United States	2.67	4.46	7.78%	12.20%
5. Canada	.93	.86	2.70%	2.34%
World Total	34.37	36.55	100%	100%

Source: World Trade Atlas

Overall, the dairy industry offers a risky environment for foreign investors, as about 60 companies have entered the market and only a few giants have fared well. Nestle (Switzerland), International Nutrition Corporation (Denmark) and Parmalat (Italy) are the most active players in the market. With the exception of Danone and Kraft, who sold their production assets to local partners and established joint ventures with Shanghai Bright and Beijing Sanyuan, respectively, there have been relatively few mergers and acquisitions in the dairy industry.

The strategic focus of multinational companies such as Nestle and Danone generally has been to cultivate brand awareness and to market relatively high-quality products. The key to maintaining a presence in the Chinese dairy market is to have a long-term view of the market as well as the muster to stomach years of losses. Unfortunately, only major multinational companies tend to have such capabilities. According to Rabobank, such companies tend to have a national distribution system and can compete with cheaper and lower quality domestic products in many regional markets. The multinationals aim to source raw materials locally, but also often rely on imported ingredients.

Clearly, small and medium-sized dairy companies cannot afford to commit to such long-term strategies. Insufficient cash flows and debt obligations inhibit long-term survival. Notably, these companies have recently faced stiffer competition from lower-cost producers such as state-owned conglomerates or multinational joint ventures.

However, foreign companies have been successful in producing high-value products and long-life products, especially in retail outlets that cater to foreigners. Foreign brands dominate the infant formula market and have enjoyed success in the yogurt market as well. As for ingredients in the mass urban markets, New Zealand and Australia tend to dominate milk powder imports and cheese imports. In contrast, the US has enjoyed success with more specialized ingredients, such as whey powder concentrate (WPC) and lactose. American whey producers are increasingly working on ingredient applications and methods of entry into the local market (see **Figure 7** below).

Figure 7: US Dairy Exports to China by Product

Product	1997 Total Imports	1997 US Imports	2001 Total Imports	2001 US Imports	2002 Total Imports	2002 US Imports	US% Change '01-'02	US Share
Milk Powder (all)	35,953	4,976	59,932	2,435	111,785	1,361	-44%	1.2%
Fresh Cheese	29	0	368	7	337	5	-30%	1.5%
Grated or Powdered Cheese	4	1	174	134	112	68	-49%	60.7%
Ice Cream	508	131	650	452	935	195	-57%	20.9%
Whey and Modified Whey (all)	74,467	21,758	119,781	40,449	137,928	51,135	26%	37.1%
Lactose (all)	1,680	478	11,192	8,080	11,778	8,338	3%	70.8%
Preparations used in feeds	70,615	22,304	72,575	24,694	93,759	51,652	82%	55.1%
Milk Albumin	9	0	1,194	3	172	46	1555%	26.7%

Volume: Metric Tons
Source: World Trade Atlas

V.2. WTO tariff cuts and impact on domestic dairy industry

The agreement to lower tariffs on dairy products, part of China's entry into the WTO in December 2001, will continue to transform the nature of the industry's growth (see **Figure 8**

below). Import tariffs on all major dairy products except whey powder have fallen significantly. The ensuing influx of raw material imports will affect the insufficient local supply of milk. Antiquated dairy farming technology and scarce farming land point to insufficient raw milk production; thus imported milk powder shall serve as an important alternative for many dairy processing companies.

Figure 8: WTO Tariff Rates for Dairy Imports

	Before WTO entry	After WTO entry (2002)	2004
Liquid milk	25%	19%	15%
WFP, SMP	25%	13.8%	10%
Yogurt	50%	26%	10%
Whey powder	6%	6%	6%
Butter	50%	30%	10%*
Cheese	50%	27.2%	12%*

* in 2005

Source: Ministry of Foreign Trade and Economic Cooperation, 2002

The impact of WTO entry on the dairy industry will become more discernable over the next few years, when tariffs continue to drop. The post-WTO tariff scheme has already pressured many producers of widely imported products to abandon their original focus and turn to the liquid milk sector, where imports are minimal.

In an effort to revitalize the domestic dairy industry in the face of increasing competition, the Chinese government has implemented various policies that promote production and consumption. First, a government fund of USD242 million has been set aside for dairy research and technical projects. Second, a government-sponsored school milk program called "student milk (*xuesheng nai*)" aims to provide 600,000kg of milk to 3 million students over three years. The program has already provided 380,000kg of milk to 1.9 million students. The program not only encourages consumption among children but also improves production quality by using milk from only those suppliers who adhere to certain standards. Third, various farming policies have been implemented and targets have been set to improve Chinese milk production. While the effectiveness of such measures has yet to be determined, the policies reflect the government's understanding and focus on industry development.

VII. KEY CONTACTS

Please feel free to refer to **Gain Report #CH2053**, entitled "Dairy and Products Annual 2002."

US Dairy Export Council, Shanghai

Suite 436, Shanghai Centre

1376 Nanjing East Rd.

Shanghai, 200040

Tel: (86-21) 6279-8668

Fax: (86-21) 6279-8669

email: usdec@prcon.com

US Agricultural Trade Office, Shanghai

Suite 331, Shanghai Centre

1376 Nanjing East Rd.

Shanghai, 200040

Tel: (86-21) 6279-8622

Fax: (86-21) 6279-8336