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Annual Report

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Report Highlights:
China's long-term dairy policies will encourage increased milk production through better cow genetics, providing excellent market opportunities for exported U.S. bovine genetic materials. Chinese experts are even predicting that China will become the world's third-largest dairy producer by 2020. China's cow milk production in 2007 is forecast to increase 16 percent to 38.1 MMT, non-fat dry milk powder production is forecast to remain flat at 55,000 MT and whole fat dry milk powder production is forecast to increase 12 percent to 1.2 MMT respectively. Domestic production continues to lag booming demand, and China's non-fat dry and whole fat milk powder imports in 2007 are forecast to increase 23 percent to 80,000 MT and 18 percent to 100,000 MT respectively. Hong Kong and Macau absorb most of China's limited dairy product exports.

Includes PSD Changes: Yes
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Beijing [CH1]
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Executive Summary

China's milk production continues to grow rapidly in response to domestic demand, but the pace of increase is forecast to continue slowly in 2007 because of fluid milk production constraints and rising domestic production costs. China's long-term dairy policies to increase yields and quality will favor genetic improvements over expanding cow numbers. The sector will thus be the recipient of considerable domestic and overseas investment. The lagging dairy cow numbers and milk production levels will result in strong demand for U.S. bovine genetic materials and dairy products to China in 2007.

Post forecasts China's raw cow milk production in 2007 to increase 16 percent to 38.1 MMT, non-fat dry milk (NFDM) production to remain flat at 55,000 MT, and whole fat dry milk (WFDM) production to increase 12 percent to 1.2 MMT. Domestic NFDM and WFDM productions lag demand, which will most likely drive large imports in 2007.

China's fluid milk imports are almost nil due to cost, transportation and storage limitations. Post forecasts China's NFDM imports in 2007 to increase 23 percent to 80,000 MT and WFDM imports in 2007 to increase 18 percent to 100,000 MT. The United States is the largest whey supplier to China's market, accounting for 38 percent from January to September 2006. Although China's whey demand is strong due to limited domestic production, global supply capacity normally impacts China's imports.

China mainly exports two kinds of dairy products, fluid milk and WFDM. Post forecasts China's fluid milk exports to increase 8 percent to 40,000 MT and WFDM exports to increase 6 percent to 36,000 MT due to the demand increase in the traditional markets in East and Southeast Asia. China's fluid milk exports to Hong Kong and Macau account for 96 percent of China's total fluid milk exports and WFDM exports to Taiwan, Hong Kong and Myanmar account for 75 percent of China's total WFDM exports.

Production

Both total milk and cow milk production in 2007 forecast to increase 16 percent to 39.3 MMT and 38.1 MMT respectively

FAS Beijing adjusted China's 2006 total milk production 2 percent down to 34 MMT and cow milk production 3 percent down to 32.8 MMT from the previous estimation (CH5075) due to the slower pace of heifer size increase due to production constraints. The production numbers for 2005 were also adjusted slightly down based on the China Statistic Yearbook 2006 published by the National Statistics Bureau (NSB).

China's cow milk production accounts for 96 percent of the country's total milk production. The top five producing provinces or autonomous regions are Inner Mongolia, Heilongjiang, Hebei, Xinjiang and Shandong, accounting for two-third of China's total cow milk production.

China's cow milk production has mostly risen due to expansion in cow numbers rather than average yield increases. The annual yield per cow is only about 4 MT, which is about half the level of the United States. Following 5 years of rapid expansion in dairy cow numbers (e.g., 4.9 million head in 2000 to 12 million head in 2005), production now faces limits to domestic milk resources and inputs such as feed. Although production costs have gone up considerably for dairy farmers, processing plants have not raised commensurately their milk purchase prices because of efforts to maintain their market share. As a result of this price stagnation to the farmer, their profits have fallen. In turn, China has started shifting efforts from fast expansion in cow numbers to yield increases through genetic improvements. This

focus on improving dairy genetics will provide an opportunity for U.S. companies to export bovine genetic materials.

During 2006, China announced its 11th Five-Year-Plan (11th FYP) including a long-term plan for milk development (see the 11th FYP sector). The plan will slow the pace of China's increase in both dairy cow numbers and cow milk production. In the long run, the slow pace of increase in cow herd size will be offset by yield increases, but in a short term the strong domestic demand coupled with smaller pace of increase in cow number and milk production will most likely drive larges dairy product imports in the next couple of years—and market opportunities for U.S. companies exporting dairy products to China in 2007.

Resource limitations slow the pace of China's cow milk production increase

Limited land, water, feed and energy resources remain considerable challenges to China's dairy sector. According to the Ministry of Agriculture (MOA), domestic feed corn prices have increased 7 percent, and alfalfa and corn stem prices have increased 25 percent on average since the beginning of 2006. As a result, the profit margin per cow dropped 50 percent from $385 per head in 2002 to $192 per head in 2006. Hand milking still accounts for 65 percent of China's output, and unstable milk quality sometimes lead to processing plants' refusal to collect milk from dairy farmers. The policy of forbidding over-herding in domestic grasslands will continue for the foreseeable time. China's the 11th FYP for grain (2006-2010) for grain is set to increase grain production only about 0.7 percent due to land limitation. Water price increases are already under discussion by the Government. These issues will remain huge hurtles for China.

A new concern to the industry is foot and mouth disease (FMD). From January 2005 to August 2006, China had 22 FMD outbreaks. Nearly 1,000 cattle were infected and over 5,000 were culled, mostly dairy cows. With 80 percent of China's cows raised by backyard farmers, coupled with insufficient veterinary services, disease control remains a challenge for China.

Another factor impacting milk output is that Inner Mongolia, one of China's top milk producers, has slaughtered 100,000 head low yield dairy cows. In the next 2-3 years, the region will slaughter or improve another 400,000 head, according to the dairy industry. New placements will take a couple of years for commercial production. This has also contributed to the slow pace in cowherd size.

China lacks a national standard and test method to distinguish drinking milk processed with fresh raw milk, or reconstituted from milk powder. The State Council's "Notice of Strengthening Management on Fluid Milk Production and Marketing", issued on September 18, 2005 (see CH5075) only allows fresh raw milk for pasteurized processing. Other products the industry uses, such as UHT that includes reconstituted milk as a raw material, must be labeled as "reconstituted" and include the milk powder percentage.

However, after one year of implementation, the industry reports that few plants abide by the regulation, and there appears to be minimal government enforcement. China's milk powder imports increased 36 percent to 107,019 MT (equivalent to 856,152 MT of fresh raw milk) in the first 9 months in 2006, resulting in a price war between raw milk and reconstituted milk products and even led some small scale dairy farmers to cull their dairy cows.

China announced another new labeling national standard, "The General Rule on Labeling of Pre-packed Food – GB7718, on October 1, 2005 (see CH5057). However, the government postponed 3 times the labeling requirement for pasteurized and UHT milk (now the date is January 1, 2007) due to strong opposition from the domestic raw milk producers and

processors. "The Guidance of Implementing GB7718-2004" forbids processors to label pasteurized milk as "fresh milk" instead of "pasteurized". Given that freshness is a competitive market edge, the translation of "pasteurized" on the label will confuse most consumers. As a result, cheaper UHT milk—largely reconstituted from imported milk powder—will likely increase market share and consequently lead to larger imports and impact domestic milk production.

China's 11th Five-Year-Plan (2006-2010) and long-term plan (2011-2020) for dairy development

China's 11th Five-Year-Plan (2006-2010) and the Long-Term Plan (2011-2020) for Dairy Development				
	2006-2010	2011-2020	% Change 2006-2010 (on Average)	% Change 2011-2020 (on Average)
Total Dairy animal inventory	(1,000 Head)	(1,000 Head)		
Dairy Cow	15,350	18,200	5.6	1.7
Dairy Goat	8,000	11,000	8.1	3.2
Dairy Water Buffalo	66	200	22	11.7
	(1,000 MT)	(1,000 MT)		
Total Milk Production	38,000	60,000	8.2	4.7
Cow Milk	36,200	57,300	6.3	5.8
Goat Milk	1,700	2,400	n/a	4.1
Water Buffalo Milk	100	300	n/a	20
Source: China Dairy Statistic Yearbook 2006				

MOA announced the above dairy development plan during mid-2006. China's new target is to focus on dairy genetic improvement instead of expansion in cow numbers. MOA forecasts that the yield per cow will reach 4.3 MT by 2010 and 5.7 MT by 2020. Since China's purebred Holstein cows only account for one-third of total dairy cows, this genetic improvement effort will take years. Several projects already started in China (see below section) will provide market opportunities for U.S. companies in this market.

Chinese experts forecast that China's milk production will rank third in the world after the United States and India by 2020, though FAS Beijing forecasts a gradual slowing in China's pace of cow milk production. Nonetheless, continued huge investments and China's crop pattern change from 2-way plantings (grain-oilseeds) to 3-way planting (grain-oilseeds-feed grain) may help exceed the targeted pace, aided by the Government's subsidizing corn silage production during the 11th FYP period.

The World Bank project in Heilongjiang Province (2007-2011)

This project is reported to include funding of about RMB 1.48 billion ($189.7 million). The World Bank approved a $100 million loan in January 2006, and the provincial government will provide another $100 million. The project includes, first, "Dairy Cow Production" for the construction of 7 dairy farms each raising 1,000 cows, and building 125 cow farm "gardens" for demonstration purposes. A total of 40,000 head will be bought, and 40 percent will be imported from abroad. Second, a "Service System" will focus on dairy herd improvement (DHI) with the construction of 1 lab and 1 data processing center. At least 800,000 straws of frozen bovine semen will be imported from abroad within 5 years. Third, "Environmental Protection" will mainly use an Italian Government's grant valued at RMB 5.5 million ($705,000) to improve crop stem production and cow waste treatment. This massive World Bank project is open to all bidders and will provide further market opportunities for U.S. companies to export bovine genetic materials to China. Please refer to the website www.worldbank.org/projects for information.

Domestic genetic improvement subsidy program

During 2006, the Chinese Central Government announced it will implement a financial subsidy program for dairy cow genetic improvement valued at RMB 100 million ($12.7 million) a year in 22 provinces. Twenty percent of the subsidy will be used for importing dairy cattle frozen semen or embryos. Some local provincial governments have similar programs. This will also provide a market opportunity for U.S. companies exporting bovine genetic materials to China. FAS Beijing recommends contacting the MOA for more information.

NFDM production in 2007 forecast at 55,000 MT, no change from this year, and WFMP production is forecast to increase 12 percent to 1.2 MMT

NFDM production only accounts for 5 percent of China's total milk powder production, and the balance must be met by imports. NFDM production in 2005 decreased 12 percent due to several domestic milk powder safety incidents during 2004- 2005 that impacted consumption. Post forecasts China's 2006 NFDM production to decrease 8 percent mainly due to domestic production cost increases and cheap imports. Strong domestic demand combined with limited domestic production appears most likely to drive large imports in 2007. This will provide a good opportunity for U.S. companies to export to China. The United States already surpassed Australia to become the second largest supplier to China in the first 9 months in 2006.

Post forecasts China's WFMP (whole fat milk powder) production in 2007 to increase at the same pace as in 2006 driven by strong domestic demand for food processing, infant formula milk powder, functional milk powder and reconstitution. Our forecast for WFMP production during 2006 is 3 percent higher to 1.03 MMT from the previous estimation (see CH5075). More milk was used for WFMP production to make yogurt and UHT milk because most China's milk resources are located in remote areas, and transportation distances are long. It is more convenient to transport milk powder, and milk powder can be stored longer.

Of total milk powder production, NFDM accounts for about 5 percent. For WFMP, ordinary products account for 21 percent, sugar-added products account for 14 percent, infant formula products account for 38 percent and the rest are other functional or formula products. The biggest changes in the last few years are that infant formula increased from 20 percent in 2000 to 38 percent in 2005 due to more bottle-feeding, and sugar-added milk powder decreased from 30 percent in 2000 to 14 percent in 2005 because more consumers reduced sugar intake due to diabetes. This trend is expected to continue in 2007.

Consumption

According to Chinese academic research, China's per capita dairy consumption increases 0.94 percent when China's GDP increases 1 percent, and dairy demand increases 0.64 percent when incomes increase 1 percent. China's GDP growth was 10.5 percent in 2005 and 11 percent in the first half of 2006. NSB data shows that during the first 9 months of 2006, per capita disposable incomes for Chinese urban residents were RMB8,799 ($1,128), up 10 percent, and farmers' per capita cash incomes were RMB 2,762 ($354), up 11.1% over the same period of 2005. Chinese experts forecast that China's GDP will reach RMB 3,200 billion ($410 billion) and per capital GDP reach $2,400 respectively by 2010. These economic indicators support strong growth in China's dairy consumption for the foreseeable future.

China's per capita milk consumption was 21.7 KG during 2005, only 20 percent of the world average level, although it tripled from 2000. MOA forecasts that China's per capital milk will reach 28 KG by the end of 2010 and reach 42 KG by the end of 2020.

China's total dairy product production was 13 MMT by the end of 2005, increased 28 percent from 2004. The China Dairy Industry Association (processed) forecasts that China's dairy product production will reach 21.9 MMT by the end of 2010. Post believes that as China's economy grows, highway and railway transportation develops and supermarkets reach further to rural areas, dairy consumption will grow steadily.

Fluid use consumption in 2007 forecast to increase 15 percent to 16.9 MMT and factory use consumption in 2007 forecast to increase to 17 percent to 22.4 MMT

FAS Beijing's current forecast for China's fluid use consumption in 2006 is 7 percent smaller (14.8 MMT) and fluid use consumption for 2005 is 4 percent smaller (12.5 MMT) respectively from the previous forecast (see CH5075) due to the slow pace of increase in China's raw milk production during both 2005 and 2006.

Both the NSB and the Chinese dairy industry count pasteurized milk, UHT milk and yogurt as fluid milk. Pasteurized accounted for 18 percent, UHT accounted for 66 percent and yogurt accounted for 16 percent by the end of 2005. The pasteurized share has dropped from 60 percent in 2000 to 18 percent in 2005 due to inconvenient storage and transportation constraints, while the UHT share increased from 21 percent in 2000 to 67 percent in 2005 due to the same factors and partly due to cheaper prices.

China's School Milk Program has contributed greatly to UHT milk consumption. China started the "School-Milk Program" in 2000. Up to now, the program has covered 28 provinces, autonomous regions and municipalities directly under the Central Government. About 10,000 schools in more than 60 large-medium sized cities benefit from the program. Milk supplies have reached 2.43 million boxes, a 26 percent up from 1.93 million boxes in 2004. This trend will continue as more schools are included in the program and UHT milk is the supplied product.

Yogurt consumption has been growing fast due to the development of retail selling sector with better cold storage conditions (see "marketing" below). Asian people's lactose-intolerance for fresh milk has provided an opportunity for yogurt. Per capital yogurt consumption for urban residents increased from 1.36 KG in 2001 to 3.23 KG in 2005. Post forecasts that China's per capita yogurt consumption will increase at a pace of 10-15 percent during the next couple of years.

See the Marketing and Distribution section for more discussion of dairy product consumption.

NFDM consumption in 2007 forecast to increase 13 percent to 134,000 MT and WFDM consumption in 2007 forecast to increase 12 percent to 1.2 MMT

FAS Beijing forecasts China's NFDM consumption in 2007 to increase to 134,000 MT due to strong domestic demand. FAS Beijing revised the NFDM PS&D table by increasing consumption in 2006 18 percent to 119,000 MT due to increased imports. NFDM has minimal substitutes because it is mainly for consumers who have health problems such as high cholesterol and obesity. Strong domestic demand coupled with limited production will most likely drive large imports in 2007, thus providing good market opportunities for U.S. exports.

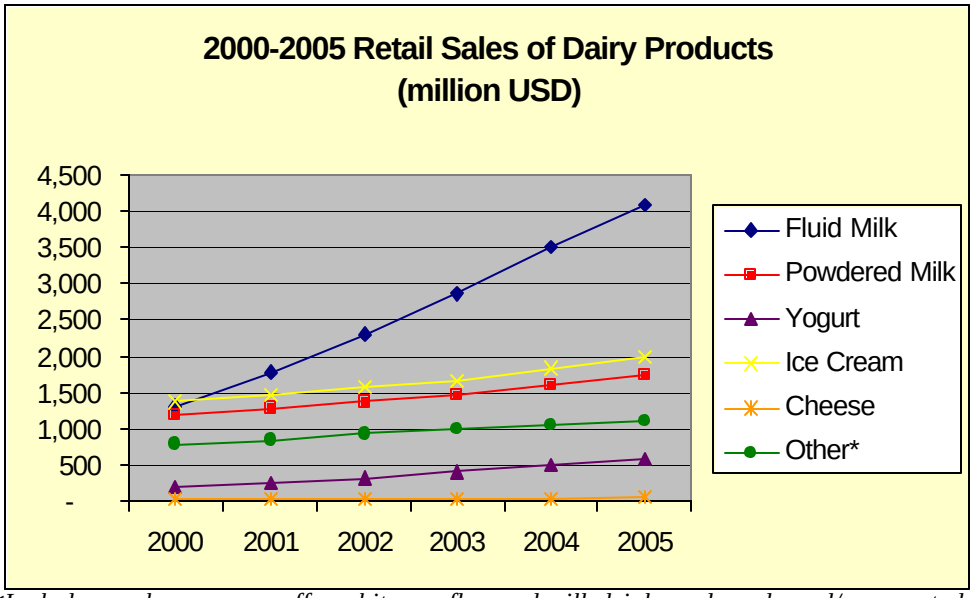
Post forecasts China's WFDM consumption in 2007 to increase 12 percent to 1.2 MMT from an estimated 1.1 MMT in 2006. The current forecast for WFDM consumption in 2006 is 5 percent higher than the previous estimation (see CH5075) due to domestic WFDM production and import increases. Infant formula milk consumption is growing the fastest because most busy young mothers have no time to breast-feed, and many choose bottle-feeding in order

to regain their fitness after childbirth. Wealthier Chinese prefer imported infant formula products, especially after several infant death cases in 2004 due to poor quality domestic formula products. China's sampling of infant formula milk powder in the first half of 2006 shows 70.4 percent was qualified, still not a satisfactory. This will drive enfant formula milk powder imports in 2007.

Marketing and Distribution

Market Size

The dairy industry in China has maintained a high rate of growth over the past ten years. Total dairy sales reached $10.9 billion in 2005.



**Includes soy beverages, coffee whitener, flavored milk drinks and condensed/evaporated milk*

Source: Euromonitor

In 2005, the per capita consumption of dairy products reached 21.7 kg. While the overall consumption level is skyrocketing, fluid milk has been the fastest-growing segment during the past five years. In 2005, retail sales of fluid milk reached nearly $4.1 billion. Although cheese and yogurt retail sales grew by 18% and 19% respectively last year, they are still small markets.

In addition to the rise in disposable incomes driving dairy consumption, Chinese consumers are also becoming more health conscious, and they value milk as an excellent source of protein and calcium; besides, many female consumes believe that drinking milk is beneficial for their skin. Elderly Chinese view milk as a cure for insomnia with no side effects. The positive attributes of dairy products are also recognized by the Chinese government, which in turn greatly supported the sales of dairy products, especially fluid milk in the China market.

The introduction of shelf-stable UHT milk facilitated the transportation of fluid milk from the raw milk production areas in the north to the south where the population is more intensive and consumers are more affluent, and greatly improved the availability of fluid milk for consumers in urban areas. Fluid milk has become a feature of the middle class' daily diet.

For domestic manufacturers, the fluid milk market has lower entry requirements compared with other highly processed dairy product, while the infant formula milk powder market is

nearly monopolized by multinational giants such as Nestle, Wyeth and Mead Johnson. The sales of cheese and yogurt, restricted by cold chain infrastructure limitations in China, consumption habits and disposal income, are still at low levels. As a result, domestic manufacturers have been forced to compete fiercely on fluid milk and the mid and low-end milk powder business for market share.

Key distribution channels

In China, more than 80% of dairy products reach consumers via retailers, which have significantly consolidated since 2000. Supermarkets/hypermarkets are now the major outlets for all varieties of dairy products. For cheese products, yogurt and take-home ice cream, the supermarkets' role is even more important due to consumer's confidence in their overall quality and safety vis a vis cold chain facilities. Greater numbers of supermarkets and convenience stores in rural areas has also contributed to their increasing share of the distribution channel, while independent food stores, which used to be the main retail force in rural areas, have become less important.

Dairy Products Distribution Channel % breakdown in 2006

Dairy product categories	Supermarkets/ hypermarkets	Independent food stores	Convenience stores	Others
Milk	28.0	35.0	13.0	24.0
Cheese	92.0	5.0	-	3.0
Yogurt/sour milk drinks	76.0	4.0	14.0	6.0
Other dairy products	28.0	35.0	13.0	24.0
Take-home ice cream	78.0	6.5	15.0	0.5
Simple-serve ice cream	11.0	65.0	18.0	6.0

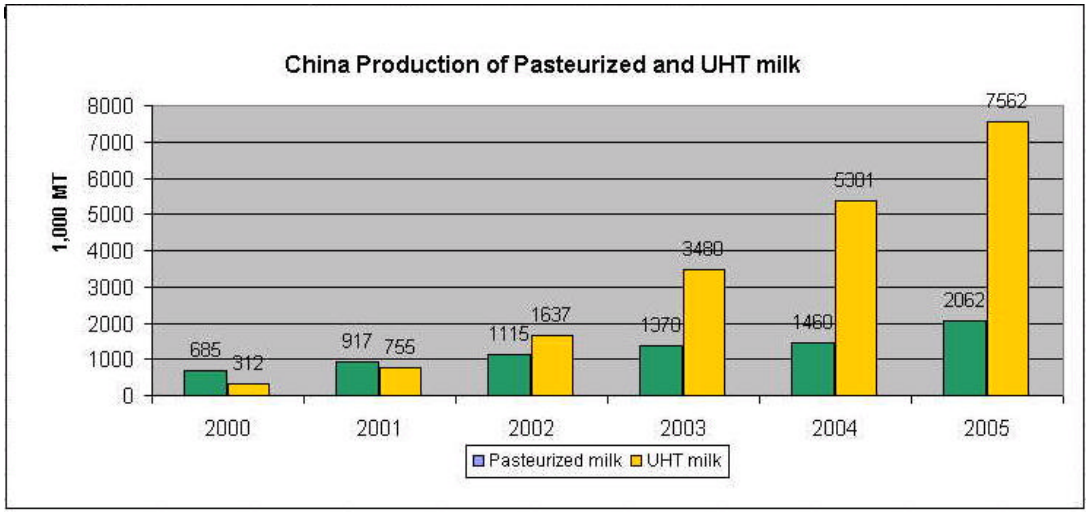
Source: Euromonitor

Television advertising is the most common way manufacturers target dairy products in the retail sector. Fluid milk, milk powder infant formula with fortified minerals, yogurt, ice cream and dairy drinks are frequently advertised. Lifestyle magazine advertising also educates consumers to drink more pasteurized milk for better nutrition, or more UHT milk for packaged safety. Some manufacturers also sponsor entertainment shows. For example, one company sponsored the Shengzhou-5 space project and successfully ranked its products as the "exclusive milk supplied to Chinese astronauts", and the Super Lady Singer competition (the Chinese version of American Idol) also successfully made its milk drinks widely recognized by younger consumers in China.

However, fierce competition among retail markets and shrinking profits is forcing the major players to explore the food service segment as another way to expand sales. One company has already started intensive promotions in the food service sector in northern China and plans to cover the market in the south as well. Current consumption of dairy products in the food service channel is only about 10% of the total, however, the profit is double or even triple the profit achieved from retail channels, for the time being.

UHT milk versus Pasteurized milk

The fiercest competition in China's dairy product market is between UHT milk and pasteurized milk. China's "cow belt" is located in northern China, although the major consumption market is mainly in the coastal provinces in eastern and southern China, where consumers are more affluent. Consumers in the big cities in the eastern and southern regions traditionally drink pasteurized milk, produced by dairy farms in suburban areas. The new phenomenon of UHT milk has quickly come to the fore and has gained a larger market share during the past four years.



Source: Beijing Oriental Agribusiness Consulting Co., Ltd.

Chinese consumers attach great importance to the "freshness" of food ingredients. The pasteurized milk industry has been using the "freshness" of pasteurized milk as the biggest selling point and educating consumers that pasteurized "fresh" milk is more nutritious than UHT milk. However, the scandals of reprocessing expired milk, pre-dating milk and adding water to milk in certain major pasteurized milk brands has brought the safety of pasteurized milk into question. Besides, the higher raw milk cost and logistics cost of pasteurized milk have resulted in a 20% higher retail price than UHT milk, and in a price-sensitive market, this makes difference.

In addition, two advantages that UHT milk enjoys in distribution explain its current success in the market. First, pasteurized milk has a shorter shelf life (up to 7 days), which makes its distribution channels limited and short, while UHT milk's longer shelf life (3 –12 months) make market development possible at all levels of distribution. Second, sales of pasteurized milk rely heavily on cold chain logistics, which requires huge investment in infrastructure and human resources. As a result, UHT milk will likely continue to have a leading role in new market development in rural areas with comparatively low average milk consumption and limited cold chain infrastructure.

Dairy companies are facing increasing price competition in China, and they must adopt strategies to deal with high production costs driven by the dramatic rise in sugar prices and packaging costs. Competition is especially fierce in the fluid milk sector, because the entry costs to the fluid milk business is comparatively low, and in recent years the production of fluid milk has grown faster than consumption. Continuously cutting prices has become an effective way for players to maintain their market share.

Milk industry price wars have helped dairy products become more affordable to mass consumers, but have hindered the quality improvement of manufacturers. Less efficient local companies have phased out of the market, and several multinationals were also forced to retreat from China not long after their entry into the market.

Niche market and new products

Dairy manufacturers are exploring new markets in second and third tier cities and even rural areas, and they are looking for innovation in products, branding and marketing. The milk tablet is a good example of the niche market that experienced explosive growth during 2004-2005. As a derivative product from fluid milk, the milk tablet makes "convenience" its biggest selling point, and sales soon spread to convenience stores. Within a year, hundreds of companies launched their milk tablet production line.

The driving force behind this product is higher profitability – the cost of milk tablets is just about 50% of the cost of ordinary milk powders, although their retail prices are similar. While the milk tablet is quickly bringing returns to investors, some in the industry are not optimistic about its long-term profitability. While the product has enjoyed a niche market among shelf-stable milk and "fresh" milk the last couple of years, the rush to the market may lead to declining profits and fewer brands in the future.

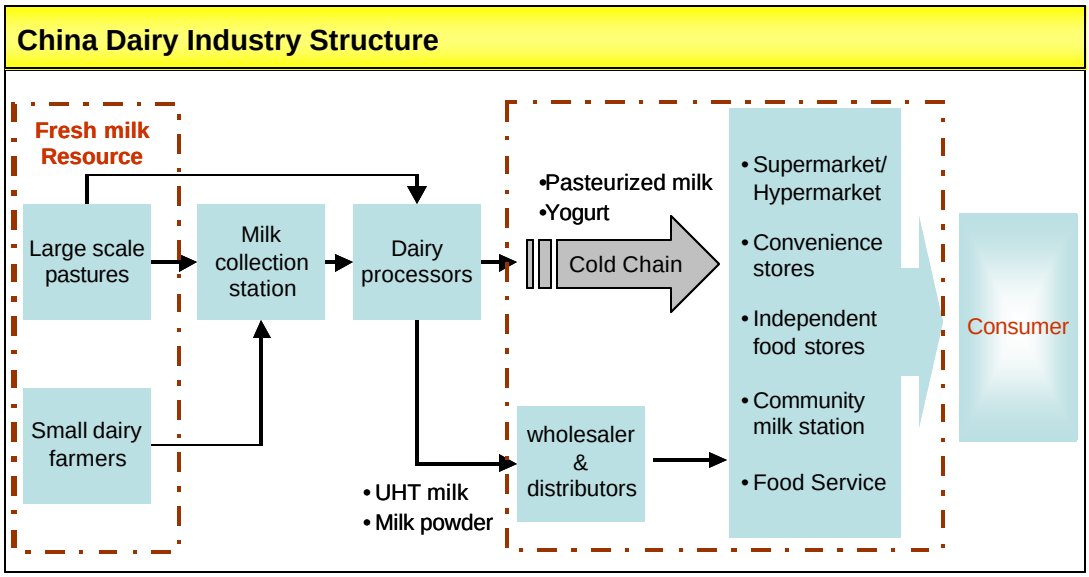
Cheese and yogurt are the two emerging stars in the dairy market in China. Last year the sales of cheese and yogurt jumped 18% and 19%. Annual production of cheese in China is around 10,000 MT, and cheese imports are around 8,000 MT. These products are not a traditional food in the Chinese diet, but the growth potential is tremendous.

Because of the higher processing technology requirement, competition in this market is mainly among the foreign brands from Australia, New Zealand and U.S., and the high prices of most imported cheese makes it a luxury food item for mass consumers in China. However, attracted by higher profitability and less fierce competition in this sector, some leading dairy companies have already launched their cheese production line, and started a consumer education program. The concept that cheese is a good source of protein and calcium for lactose-intolerant Asian people has found its way into the middle-class consumers' mind.

Yogurt is another fast growing dairy product in China averaging an annual rate of 23% since 2000; sales in 2005 totaled $582 million. Compared with fluid milk, the yogurt market is more difficult to enter due to the higher production technologies required. Consequently, reduced competition has resulted in higher profitability. The new Biyou yogurt launched in 2005 has been growing at a double-digit rate, while the growth rate in the Shanghai area was as high as 70%.

The battle at the two ends of the industry chain

China's dairy manufacturers report that the key to success in China lies at the two ends of the supply chain: raw milk resources and distribution channels. The company that can secure a stable supply of fresh raw milk to the processing sector and deliver the dairy products to the consumer will be the winner. There is a widely recognized business rule in China's dairy industry that "the one who controls the milk resources controls the market". To this end, the major players in the industry have been adjusting and planning their new production bases according to their analysis of the market and the availability of raw milk resources in the past five years.



Since 2000, the shortage of raw milk resources has become more and more severe. The six provinces in northern China--Heilongjiang, Inner Mongolia, Hebei, Shandong, Beijing and Shanxi--produce more than half of the total raw milk in China. This overwhelming proportion continues to grow.

The competitiveness of China's dairy manufacturers is based on nation-wide distribution channels. While continuing to increase the supply of milk, they are also trying to penetrate into the pasteurized milk market via acquisition of or merger with other dairy businesses in the major consumption markets.

Key players: two manufacturing groups

There are a total of about 1,600 milk processors in China, and the domestic major players can be roughly divided into two groups: resource-oriented manufacturers and market-oriented manufacturers. The representatives of the former are Yili and Mengniu from Inner Mongolia, Wandashan from Heilongjiang, Sanlu from Hebei, and Yinqiao from Shan'xi, while Bright Dairy from Shanghai, Sanyuan from Beijing, Nanjing Dairy Group from Nanjing and VV Group from Jiangsu are the major players in the latter group. Geographically, the resource-oriented manufacturers are located in the north, and urban dairy manufacturers are close to the major markets in the more populated east and south.

Competition in the marketplace has resulted in industry consolidation. Yili, Mengniu and Bright Dairy rank among the top three manufacturers in terms of annual output, and the three together have more than 50% market share countrywide.

Major foreign dairy brands competing in the marketplace are Nestle, Wyeth, Dumex and Mead Johnson. However, their portfolio is focused on high value-added milk powder products such as infant formula and vitamin and mineral fortified products. These multinationals normally do not have their own raw milk resources in China and rely on imported milk powders.

Trade

NFDM imports in 2007 forecast to increase 23 percent to 80,000 MT and WFDM imports forecast to increase 18 percent to 100,000 MT

Post's forecast for China's 2007 NFDM imports is based on strong domestic demand and little domestic production. Post adjusted current forecast for China's 2006 NFSM imports 25 percent up to 65,000 MT from the previous forecast of 52,000 MT in the last dairy annual report CH5075. The major reason for this change is that imports for the first time will surpass domestic production due to cheaper international prices. The average unit price for imported NFDM from January to September 2006 was $2,150/MT, a 2.3 percent decrease over the same period in 2005. China's policy change on pasteurized and UHT production and labeling will also not impact imports in 2006 since it was postponed to January 1, 2007. This trade pattern may continue into 2007 because substitutes for NFDM don't exist in China.

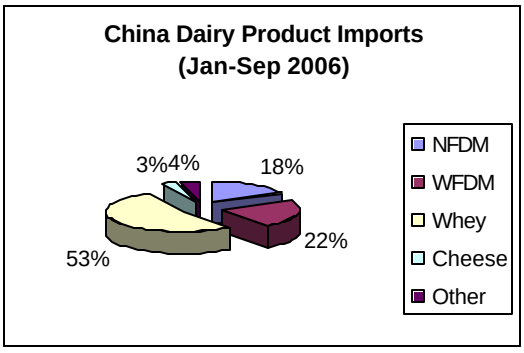
The United States already surpassed Australia to become the second largest supplier to China in the first 9 months in 2006 due to competitive prices generated by a favorable U.S. dollar exchange rate. China's import unit prices for DFDM from New Zealand and Australia were $2,260/MT and $2,060/MT respectively during Jan-Sep 2006, while it was $1,990/MT from the United States.

Post forecasts China's WFDM imports in 2007 to increase 18 percent to 100,000 MT from an estimated 85,000 MT in 2006 due to production lagging demand. Post's current forecast for China's 2006 WFDM imports are 31 percent higher from 65,000 MT in 2005. This considerable forecast change from the previous estimation (60,000 MT) in the last dairy annual report CH5075 is based on the same above-mentioned fact that China's implementation of the new regulation on production and labeling for pasteurized and UHT milk, postponed to January 1, 2007, has not impacted China's imports. Post forecasts that if the new regulation becomes effect on January 1, 2007, it may drive large imports in 2007 because it is more difficult for domestic pasteurized milk to compete with UHT milk largely reconstituted with imported WFDM. New Zealand and Australia dominate supplies of China's WFDM imports, accounting for 97 percent of china's total imports. U.S. WFDM exports to China are very small, only accounting for over 1 percent of China's total imports from January to September 2006. However, U.S. export volume increased from 34 MT in 2005 to 777 MT valued at $1.7 million, a 287 times increase in value over the same period in 2005. A devalued U.S. dollar will continue to encourage exports to China.

Whey imports account for 53 percent of China's total dairy product imports, the United States is the largest supplier accounting for 38 percent

China's rapidly developing livestock, food and dairy processing industry has driven large whey imports. The whey import tariff is also the lowest among all dairy product import tariffs.

The U.S. is the largest whey supplier to China accounting for 38 percent of China's total whey imports from January to September 2006. U.S. export volume to China decreased 9 percent, but export value increased 16 percent during the same period.



Whey exports from European countries to China, especially France, have increased rapidly, but the United States and France are not supplying the same product to China's market. The United States mainly exports sweet whey to China. Half of it is used for feed, and the other half is used for food processing, while France mainly exports de-mineralized whey to China

mainly used for infant formula milk powder. The global short supply in whey has diverted U.S. whey to other higher priced markets. China's fast increase in infant formula powder production (up 38 percent in 2005) has provided a chance for French whey. Post forecasts China's whey imports will continue strong in 2007 due to strong domestic demand and little production, as well as narrow substitute. However, global whey availability impacts China's imports.

China's cheese imports are on the rise because domestic production is only about 10,000 MT, according to the Chinese industry. Prosperous tourist development, and the strong influence of western food culture, combined with limited domestic production, has fueled imports. China's cheese imports in from January to September increased 37 percent to 7,496 MT over the same period in 2005. Although New Zealand and Australia dominate China's cheese imports, U.S. exports to China have cut into their share with an increase to 669 MT during the same period. Post believes U.S. exports will continue rising due to a favorable U.S. dollar exchange rate and the U.S. Dairy Export Federation's successful market promotions.

Selected China's national standards for dairy products, in reference to U.S. trade

GB 19644—2005 Hygienic standard for milk powders
GB 11674—2005 Hygienic standard for whey powders
GB 5420—2003 Hygienic standard for cheese
GB 19646—2005 Hygienic standard for cream and butter

All of the standards became effective on October 1, 2005. Quarantine inspection problems for imported U.S. milk powder occasionally occur with nitrite detections at Chinese entry ports. China's maximum tolerance for nitrite is 2 ($NaNO_2$)/(mg/kg), for lead is 0.5 (Pb)/(mg/kg), for inorganic arsenic is 0.25 (mg/kg) and for aflatoxin M1 is 0.5 (fresh milk conversion)/(μg/kg). Additionally, China requests "0" tolerance for E.sakazakii in finished products, especially for infant formula products. Whey powder is not subjected to these standards because it is for processing. Please see the following for microbiology requirements.

Item	Index
Total number of colony, cfu/g =	5×10^4
Coli-group MPN/100g =	90
Pathogenic bacteria, Salmonella, Staphylococcus aureus,	0 tolerance

Fluid milk exports in 2007 forecast to increase 8 percent to 40,000 MT,

Hong Kong and Macau markets account for 96 percent of China's fluid milk exports. This pattern has not changed in the last few years due to transportation factors. China's exports to Hong Kong, from January to September 2006, increased 25 percent due to 26,591 MT. Hong Kong's market increase has offset Macau market decreases. This trade pattern will continue during the next few years.

Whole fat milk powder exports in 2007 forecast to increase 6 percent to 36,000 MT

Post forecasts China's NFDM exports in 2007 no change at 1,000 MT. Post current forecast adjusted China's NFDM exports in 2006 down by 50 percent due to small domestic production and the export unit price increase by 11 percent to $3,030 per MT.

China is not a big player in the world WFDM market. Its exports are estimated only account for 3 percent of total WFDM production. Post forecasts China's WFDM exports in 2007 to

increase 6 percent to 36,000 MT from estimated 34,000 MT in 2006 due to increased demand in East and Southeast Asia. China's WFDM export volume increased 15 percent to 25,404 MT from January to September 2006, while its export value increased 57 percent to $50 million. Its export markets are narrow. Taiwan, Hong Kong and Myanmar are the top 3 markets, accounting for 75 percent of China's total WFDM exports. China's increased exports to Taiwan have offset decreased exports to Hong Kong over the past year. China will continue to sell in the East and South East Asian markets because its competitiveness is weak in other export markets.

Dairy PS&D tables and trade matrix

PSD Table									
Country	China, Peoples Republic of								
Commodity	Dairy, Milk, Fluid						(1000 HEAD)(1000 MT)		
	2005	Revised		2006	Estimate		2007	Forecast	
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New
Market Year Begin		01/2005	01/2005		01/2006	01/2006		01/2007	01/2007
Cows In Milk	6700	6900	6800	8100	8350	8100	0	0	9300
Cows Milk Production	28000	28000	27534	33800	33800	32800	0	0	38100
Other Milk Production	1110	1110	1114	1140	1140	1165	0	0	1220
Total Production	29110	29110	28648	34940	34940	33965	0	0	39320
Other Imports	4	4	4	5	5	5	0	0	5
Total Imports	4	4	4	5	5	5	0	0	5
Total Supply	29114	29114	28652	34945	34945	33970	0	0	39325
Other Exports	31	31	34	31	31	37	0	0	40
Total Exports	31	31	34	31	31	37	0	0	40
Fluid Use Dom. Consum.	13000	13000	12500	15800	15800	14750	0	0	16900
Factory Use Consum.	16083	16083	16118	19114	19114	19183	0	0	22385
Feed Use Dom. Consum.	0	0	0	0	0	0	0	0	0
Total Dom. Consumption	29083	29083	28618	34914	34914	33933	0	0	39285
Total Distribution	29114	29114	28652	34945	34945	33970	0	0	39325
CY Imp. from U.S.	0	0	0	0	0	0	0	0	0
CY. Exp. to U.S.	0	0	0	0	0	0	0	0	0

Country	China, Peoples Republic of								
Commodity	Dairy, Milk, Nonfat Dry						(1000 MT)		
	2005	Revised		2006	Estimate		2007	Forecast	
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New
Market Year Begin		01/2005	01/2005		01/2006	01/2006		01/2007	01/2007
Beginning Stocks	0	0	0	0	0	0	0	0	0
Production	60	60	60	55	55	55	0	0	55
Other Imports	55	55	43	52	52	65	0	0	80
Total Imports	55	55	43	52	52	65	0	0	80
Total Supply	115	115	103	107	107	120	0	0	135
Other Exports	2	2	2	2	2	1	0	0	1
Total Exports	2	2	2	2	2	1	0	0	1
Human Dom. Consumption	113	113	101	105	105	119	0	0	134
Other Use, Losses	0	0	0	0	0	0	0	0	0
Total Dom. Consumption	113	113	101	105	105	119	0	0	134
Total Use	115	115	103	107	107	120	0	0	135
Ending Stocks	0	0	0	0	0	0	0	0	0
Total Distribution	115	115	103	107	107	120	0	0	135
CY Imp. from U.S.	7	7	6	7	7	14	0	0	18
CY. Exp. to U.S.	0	0	0	0	0	0	0	0	0

PSD Table									
Country	China, Peoples Republic of								
Commodity	Dairy, Dry Whole Milk Powder						(1000 MT)		
	2005	Revised		2006	Estimate		2007	Forecast	
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New
Market Year Begin		01/2005	01/2005		01/2006	01/2006		01/2007	01/2007
Beginning Stocks	0	0	0	0	0	0	0	0	0
Production	918	918	918	1000	1000	1030	0	0	1150
Other Imports	67	67	65	60	60	85	0	0	100
Total Imports	67	67	65	60	60	85	0	0	100
Total Supply	985	985	983	1060	1060	1115	0	0	1250
Other Exports	29	29	32	34	34	34	0	0	36
Total Exports	29	29	32	34	34	34	0	0	36
Human Dom. Consumption	956	956	951	1026	1026	1081	0	0	1214
Other Use, Losses	0	0	0	0	0	0	0	0	0
Total Dom. Consumption	956	956	951	1026	1026	1081	0	0	1214
Total Use	985	985	983	1060	1060	1115	0	0	1250
Ending Stocks	0	0	0	0	0	0	0	0	0
Total Distribution	985	985	983	1060	1060	1115	0	0	1250
CY Imp. from U.S.	0	0	0	0	0	1	0	0	1
CY. Exp. to U.S.	0	0	0	0	0	0	0	0	0

China Fluid Milk Imports, 2004-2006					
(Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	3,006	3,829	3,079	3,064	-0.49
New Zealand	990	1,798	1,481	1,105	-25.39
Australia	1,152	1,086	874	954	9.15
France	344	610	480	565	17.86
Other	520	335	244	440	
HS Code: 0401.1000, 0401.2000 and 0401.3000					
Source: WTA China Statistics					

China Non-Fat Dry Milk Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	55,243	42,599	33,804	47,696	41.10
New Zealand	26,974	22,313	17,006	26,354	54.97
United States	4,565	5,910	5,268	10,777	104.57
Australia	10,070	9,381	6,973	6,394	-8.30
Ukraine	2,100	441	216	2,257	944.91
India	0	1,603	1,070	1,180	10.27
Other	11,534	2,951	3,271	734	-77.56
HS Code: 0402.1000					
Source: WTA China Custom Statistics					

China Whole Fat Dry Milk Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	90,664	65,431	44,874	59,123	31.75
New Zealand	82,133	60,265	41,809	54,978	31.50
Australia	5,434	2,787	1,661	2,103	26.61
United States	155	40	34	777	2156.16
France	553	512	329	372	13.07
Other	2,389	1,827	1,041	893	-14.18
HS Code: 0402.2100, 0402.2900, 0402.9100 and 0402.9900					
Source: WTA China Custom Statistics					

China Yogurt Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	492	497	359	528	46.94
Japan	20	69	39	146	276.63
Russia	7	14	8	171	2054.76
Spain	113	108	73	80	9.71
New Zealand	158	42	31	19	-39.50
United States	41	7	5	7	48.48
Other	153	257	204	105	-48.73
HS Code: 0403.1000 and 0403.9000					
Source: WTA China Custom Statistics					

China Whey Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	177,987	188,006	138,610	141,746	2.26
United States	69,609	77,072	60,286	54,450	-9.68
France	44,114	44,277	29,398	36,272	24.93
Finland	9,610	8,881	7,937	8,285	4.38
Australia	17,988	12,824	10,011	7,749	-22.60
Ireland	8294	8,483	6,321	6,771	7.12
Netherlands	14,909	13,861	10,536	6,529	-38.03
Poland	2,476	3,684	1,692	5,338	215.48
Canada	4980	8097	5,611	4,034	-28.11
Germany	1531	1305	1,109	3,762	239.22
Italy	192	246	24	2,043	8412.50
New Zealand	1039	2845	2,245	1,466	-34.70
Argentina	50	796	535	1,376	157.39
India	0	1514	800	986	23.20
Belgium	306	999	839	748	-10.85
Other	2,889	3,122	1,266	1,937	52.98
HS Code: 0404.1000 and 0404.9000					

China Butter and Dairy Spread Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	12,379	12,835	10,437	7,116	-31.82
New Zealand	8,107	7,604	5,520	5,296	-4.05
Australia	1,007	1,026	851	465	-45.30
Finland	682	648	626	381	-39.03
Netherlands	571	146	108	202	87.04
France	429	939	910	182	-80.00
Belgium	75	814	814	181	-77.81
United States	0	0	9	117	1143.09
Ireland	394	641	640	114	-82.11
Other	1,114	1,017	959	177	-81.57
HS Code: 0405.1000, 0405.2000 and 0405.9000					
Source: WTA China Custom Statistics					

China Cheese Imports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	7,244	7,178	5,467	7,496	37.11
New Zealand	3,478	3,455	2,869	3,204	11.68
Australia	2,645	2,312	1,650	2,500	51.56
United States	190	307	179	669	273.70
Germany	203	169	135	249	84.16
Other	728	935	634	874	37.81
HS Code: 0406.1000, 0406.2000, 0406.3000, 0406.4000 and 0406.9000					
Source: WTA China Custom Statistics					

China Fluid Milk Exports, 2004-2006					
(Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	30,640	33,590	23,209	28,636	23.38
Hong Kong	28,284	30,602	21,309	26,591	24.79
Macau	1,312	1,593	1,225	886	-27.67
Singapore	289	249	190	599	214.46
Other	755	1,147	485	560	15.46
HS Code: 0401.1000, 0401.2000 and 0401.3000					
Source: WTA China Statistics					

China Non-Fat Milk Powder Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	1,529	1,521	1,234	796	-35.49
Hong Kong	927	765	616	368	-40.26
Taiwan	601	705	598	351	-41.30
Other	1	51	20	77	285.00
HS Code: 0402.1000					
Source: WTA China Custom Statistics					

China Whole Fat Milk Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Origin	2004	2005	2005	2006	2006/05
World	25,164	32,324	22,175	25,404	14.56
Taiwan	2,304	5,828	3,321	8,819	165.55
Hong Kong	14,396	12,530	10,348	7,768	-24.93
Maynmar	3,202	4,291	3,176	2,822	-11.15
Angola	980	1,344	243	1,445	495.52
Philippines	35	81	67	981	1371.80
Iraq	0	1,360	0	835	0.00
Japan	1,087	1,029	697	647	-7.17
Other	3,160	5,861	4,324	2,088	-51.72
HS Code: 0402.2100, 0402.2900, 0402.9100 and 0402.9900					
Source: WTA China Custom Statistics					

China Yogurt Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	769	1,031	745	786	5.50
Hong Kong	673	952	712	712	-0.01
Macau	47	46	29	35	20.69
Other	49	33	4	39	900.00
HS Code: 0403.1000 and 0403.9000					
Source: WTA China Custom Statistics					

China Whey Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	1,441	635	577	323	-43.89
Singapore	101	125	92	103	11.35
United States	0	155	155	97	-37.30
Albania	80	76	61	40	-34.43
Angola	1,006	104	114	0	0.00
Other	254	175	155	84	-45.81
HS Code: 0404.1000 and 0404.9000					
Source: WTA China Custom Statistics					

China Butter and Dairy Spread Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	24	65	19	120	517.13
United Arab Emirates	0	0	0	37	0.00
South Korea	0	0	0	48	0.00
North Korea	10	44	19	19	-1.31
Other	14	21	0	16	0.00
HS Code: 0405.1000, 0405.2000 and 0405.9000					
Source: WTA China Custom Statistics					

China Cheese Exports, 2004-2006 (Metric Tons)					
	Jan-Dec	Jan-Dec	Jan-Sep		Jan - Sep
	Quantity	Quantity	Quantity Comparison		% Change
Destination	2004	2005	2005	2006	2006/05
World	552	658	504	424	-15.87
Hong Kong	544	643	494	404	-18.22
Macau	8	12	8	12	50.00
Other	-	3	2	8	
HS Code: 0406.1000, 0406.2000, 0406.3000, 0406.4000 and 0406.9000					
Source: WTA China Custom Statistics					

Tariffs on Dairy Products, Effective January 1, 2006					
					Effective
		MFN	General	V.A.T	Rate
					(MFN & VAT) 1/
Fluid Milk	0401.1000	15.0%	40.0%	17.0%	34.89%
	0401.2000	15.0%	40.0%	17.0%	34.89%
	0401.3000	15.0%	40.0%	17.0%	34.89%
Powdered Milk	0402.1000	10.0%	40.0%	17.0%	29.89%
	0402.2100	10.0%	40.0%	17.0%	29.89%
	0402.2900	10.0%	40.0%	17.0%	29.89%
	0402.9100	10.0%	90.0%	17.0%	29.89%
	0402.9900	10.0%	90.0%	17.0%	29.89%
Yogurt	0403.1000	10.0%	90.0%	17.0%	29.89%
	0403.9000	20.0%	90.0%	17.0%	39.89%
Whey	0404.1000	6.0%	30.0%	17.0%	25.89%
	0404.9000	20.0%	90.0%	17.0%	39.89%
Butter & Dairy Spreads	0405.1000	10.0%	90.0%	17.0%	29.89%
	0405.2000	10.0%	90.0%	17.0%	29.89%
	0405.9000	10.0%	90.0%	17.0%	29.89%
Cheese	0406.1000	12.0%	90.0%	17.0%	31.89%
	0406.2000	12.0%	90.0%	17.0%	31.89%
	0406.3000	12.0%	90.0%	17.0%	31.89%
	0404.4000	15.0%	90.0%	17.0%	34.89%
	0404.9000	12.0%	90.0%	17.0%	31.89%
Source: China Customs					

Note: The dairy import tariff remains the same as 2005.