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Dairy Policies in Japan

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Abstract

Border measures—tariffs and tariff-rate quotas (TRQs)—provide high levels of support to Japan's producers of milk for manufacturing purposes and keep consumer prices for dairy products in Japan high by world standards. Since drinking milk is not easily traded, Japan's drinking milk market is largely autonomous from the world market. High farm costs of milk production and relatively high costs for processing and distributing drinking milk keep consumer prices of drinking milk high. Production quotas, designed to limit supplies and keep market prices stable, guide the volume of milk produced. A direct, fixed payment per kilogram of milk is provided from the Government budget to farmers for their quota production of manufacturing milk. A fund sharing farm and Government contributions pays farmers a portion of the difference between the current annual price and a historical average price when manufacturing milk prices fall. Japan's Government controls trade within the largest TRQ and imposes extremely high tariffs on imports outside the TRQs reserved for private traders. Recent changes in labeling have triggered significantly reduced demand for milk reconstituted from powder and increased demand for fluid milk.

Keywords: Japan, milk, dairy, dairy products, cheese, butter, milk powder, policies, domestic support, trade, trade liberalization, tariff-rate quota, state trading, labeling.

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Introduction

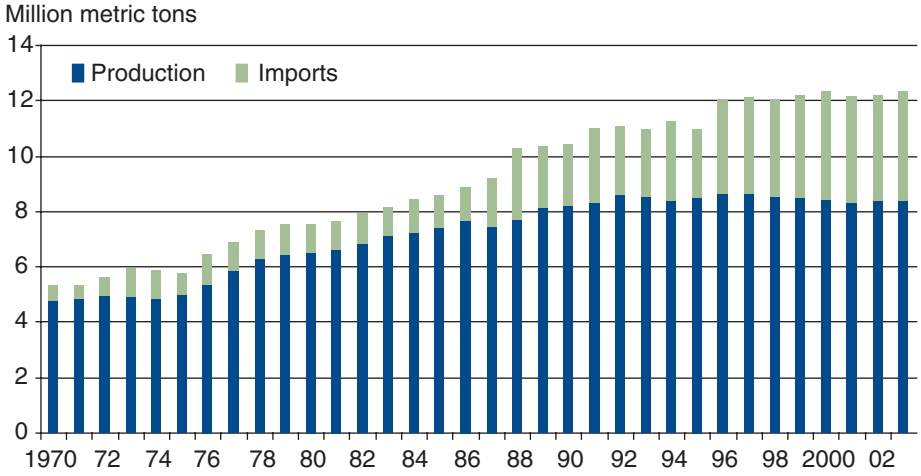
Japan is one of the leading agricultural importing nations in the world. This article is one in a series examining Japan's policies that protect and regulate its agricultural markets. These policies are of special interest for two main reasons: they affect existing trade patterns and they are important to the current round of global trade negotiations conducted by the World Trade Organization (WTO).

Japan's large dairy industry—the second-largest in East and Southeast Asia—produces drinking milk, milk for manufactured dairy products, and calves for beef production and milk cow replacement. Production (8.36 million metric tons in 2004) has been falling very gradually in recent years, and imports rising (fig. 1). Consumption appears to have leveled off in recent years (fig. 2).

Japan's dairy herd is made up of Holstein animals, and milk yields (about 8.8 tons/cow in 2003) are the seventh-highest in the world. The country's approximately 29,000 dairy farms have a total of 1.69 million dairy cattle (not including Holstein animals used for beef), or about 59 head per farm. Over 40 percent of dairy production is on Japan's northernmost island, Hokkaido, where 9,000 farms have 864,000 dairy cows (96 head per farm). In the rest of Japan, herd size is smaller, under 42 head per farm.[1]

Japan maintains a complex network of policies that provide high protection to its domestic milk production. Most of the support is for milk for manufacturing and is achieved through border barriers, which transfer about $1.4 billion to Japanese producers of manufacturing milk by allowing them to sell at prices higher than the world market prices. In addition, over $400 million goes from Japan's budget to producers of manufacturing milk in the

Figure 1
Japan's production and imports of milk

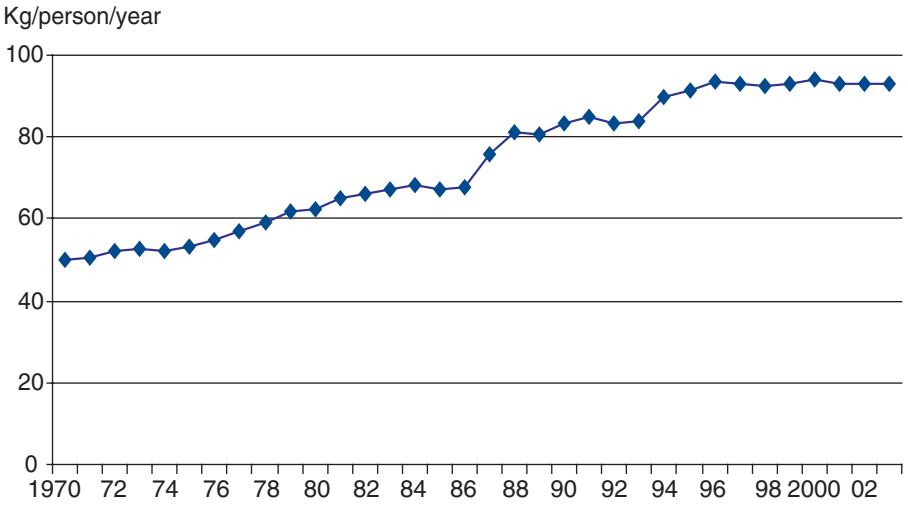


Note: Imports are dairy products, converted to a fluid-milk basis.

Source: Compiled by USDA's Economic Research Service from MAFF, Food Balance Sheet, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, various issues.

[1]MAFF, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, 2003-2004, p. 227. See Simpson and Onoochi (2002) for recent analysis of structural changes in dairy farming.

Figure 2
Japan's consumption of dairy products, fluid milk basis



Source: Compiled by USDA's Economic Research Service from MAFF, Food Balance Sheet, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, various years.

form of direct payments and compensation for year-to-year declines in market prices. Supply quotas, environmental subsidies, and a variety of programs that support farm and market infrastructure, extension services, and milk consumption benefit producers of drinking milk, as well as manufacturing milk.

Japan is the world's third-largest dairy product importer, by value, after the United States and the European Union (EU). It is a major importer of cheese—second only to the United States in both volume and value. In addition to Japan's support mechanisms, labeling policies and other regulations have significant impacts on current trade, especially in products such as dried milk and butter.

Domestic Policies

Japan has three main clusters of domestic policies: voluntary programs to limit supply and subsidize production and income; strict compulsory labeling requirements that structure commerce and trade; and a more diverse collection of programs that support producers by government purchases or sales of dairy products and subsidies for the cost of environmental programs, milk for school cafeterias, and insurance.

Supply control. Drinking milk supply is managed by the Japan Dairy Council (JDC), a "public service corporation" set up in 1962 "at the behest of the Ministry of Agriculture, Forestry and Fisheries (MAFF)." However, the JDC is not a state trading corporation. Its members are prefectural-level associations, and it is closely affiliated with the mainstream organizations of Japan's agricultural cooperative system. Since 1979, the JDC has established a target supply for drinking milk and allocated the target to its regional member groups. Those groups, in turn, have allocated targets to smaller associations that assign each dairy farm an annual target production quantity.[2]

[2]Japan Dairy Council, 2001.

The supply control system for drinking milk is voluntary. According to the JDC, about 5 percent of dairy farms did not participate in 1999. Regional associations are responsible for enforcing the system. If a regional association produces more milk than planned, the JDC "is authorized to issue a penalty to participants."[3] The penalty for exceeding the quota can be a fine—40 yen/kg for each excess kilogram in 1999—and/or a reduction in the allocation for the next year. However, according to the JDC, penalties have never actually been imposed.[4]

[3]MAFF, 1997.

[4]Japan Dairy Council, 2001.

Milk for most manufacturing purposes (i.e., for producing milk powders, butter, condensed milk, etc.) is subject to a formal, but still voluntary, quota system administered by MAFF. The quota applied to 2.1 million of the 3.3-million-ton market for manufacturing milk in 2004. Milk destined for cheese and cream production is not eligible for the quota and is covered by separate programs (see page 6).[5] The purpose of the quota is to raise the returns to manufacturing milk by limiting supply and thus raising the market price. Manufacturing milk has been a major output of the more remote production areas, especially Hokkaido, which are far from large drinking milk markets in the cities.

[5]Kobayashi (2000) provides details about the uses and marketing channels for manufacturing milk.

In 2004, farmers who participated in the quota for manufacturing milk received a direct payment of 10.52 yen for each kilogram of milk within their quota (4 cents per lb). Farmers did not receive payment for milk produced in excess of their quota. The direct payment system replaced the previous deficiency payment system in April 2001. Since then, payments have been about the same as those afforded by the deficiency payment system (table 1). Based on a subsidy payment of 10.52 yen/kg and eligible manufacturing milk production of 2.1 million tons, Japan's estimated subsidy would have been about 22 billion yen ($203 million) in 2004.

Table 1
Japanese Government payments for manufacturing milk

Fiscal year	Unit subsidy payment	Payment type	Eligible volume
	Yen/kg		*Million metric tons*
1995	11.49	Deficiency payment	2.30
1996	11.49	Deficiency payment	2.30
1997	10.87	Deficiency payment	2.40
1998	10.84	Deficiency payment	2.40
1999	10.80	Deficiency payment	2.40
2000	10.30	Deficiency payment	2.40
2001	10.30	Direct payment	2.27
2002	11.00	Direct payment	2.20
2003	10.74	Direct payment	2.10
2004	10.52	Direct payment	2.10

Note: Subsidy scheme has been switched to a direct payment mode since FY 2001.
Source: Compiled by USDA's Foreign Agricultural Service from Japanese-language records of ALIC and MAFF.

Subsidies for milk for cheese and cream production. The manufacturing milk quota and associated subsidy do not cover all dairy products produced from manufacturing milk. The Government also provides a subsidy to farmers who produce milk that is used to make natural cheese and cream. In recent years, the annual subsidy for milk for cheese has been about 2 billion yen ($19 million in 2000). Other payments have gone to milk produced under a quota of 60,000 tons for cream production.

Government/producer joint emergency fund. This program began in fiscal year 2001.[6] Funded by contributions from farmers based on their output of milk for manufacturing and contributions from the Government, the joint emergency fund pays compensation to farmers when prices fall. Under the new policies, prices for manufacturing milk are protected by Japan's border measures, but are otherwise freely determined in the domestic markets. Each year, the annual average price is compared with the average price for such milk received by farmers over the previous 3 years. If current-year prices fall below the moving average of the previous 3 years, the fund pays 80 percent of the difference in prices to participating farmers. Similar programs exist for rice, soybeans, and several other farm products (usually called income stabilization programs).

[6]Japan's fiscal years are April-March. Thus, fiscal year 2001 was April 1, 2001-March 31, 2002.

Labeling. Labeling and product terminology have been important in the recent history of Japan's dairy industry. A widely publicized investigation of an outbreak of *E. coli* contamination in drinking milk in 2000 coincidentally revealed that a major company was selling a product that contained both fresh, fluid milk and milk reconstituted from powdered milk as "milk." In July 2002, new Government regulations took effect that prevent products containing powdered milk from being labeled simply as "milk."

New regulations created six kinds of drinking milk sold in Japan:

- *Milk* is defined as milk, sterilized by heating, with no other components added or subtracted. The Ministry of Health, Labour and Welfare's "Ministry Ordinance of Milk" requires that milk contain more than 3 percent fat and more than 8 percent nonfat solids.

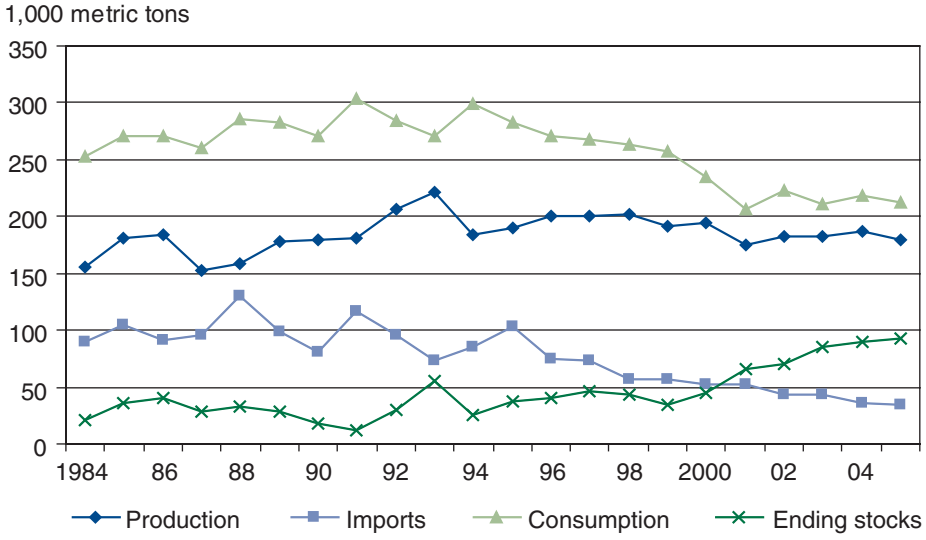
- *Low-fat milk* is milk with fat content of 0.5-1.5 percent and more than 8 percent nonfat solids.
- *Nonfat milk* is milk with less than 0.5 percent fat content and more than 8 percent nonfat solids.
- *Composition-adjusted milk* is milk with fat or nonfat solid levels that do not meet any of the previous three definitions. For example, fat content would be above 1.5 percent but less than 3 percent and/or nonfat solid content less than 8 percent.
- *Processed milk* is a mixture of raw milk and milk products, such as butter, cream, and skimmed milk powder. The mixture must have more than 8 percent nonfat solids.
- *Milk beverages* contain nonmilk origin ingredients, such as coffee extract, fruit juice, vitamins, and minerals like iron or calcium added separately from raw milk or milk products, such as butter, cream, and skimmed milk powder.[7]

This change in the definition of "milk" and the publicity preceding it appear to have reduced the overall use of powdered milk (and, to a lesser degree, butter) in Japan and helped create an oversupply of skim milk powder that persists to the present.[8] As a result, Japan's imports of skim milk powder have dropped sharply (fig. 3). The new precision in labeling of milk appears to have permanently depressed Japan's demand for milk powder, and, thus, for manufacturing milk. Conversely, it has increased demand for fresh, fluid milk. Since milk powder is easily shipped long distances, it is technically easy to import it from foreign markets, where it is much cheaper. Fresh milk is expensive to transport from foreign markets. Because of the switch from powdered milk toward fresh milk in the drinking milk market, Japan's dairy farmers have less to fear from imports than before the change in regulations.

[7]Japan Dairy Council, 2005.

[8]USDA/FAS, 2000 and 2004.

Figure 3
Japan's nonfat dry milk market



Source: Compiled by USDA's Economic Research Service from USDA/FAS (2005).

Price stabilization. The Agriculture and Livestock Industries Corporation (ALIC), a state trading enterprise, has the authority to intervene in markets for dairy products to stabilize prices. It can do this by arranging for the purchase or sale of either domestically produced dairy products or imported products (ALIC is the exclusive importer under one of the dairy tariff-rate quotas).

Subsidies for environmental improvements. In recent years, Japan's restrictions on livestock waste have been strengthened, and farmers have been obliged to improve their management of waste. Often, these improvements result in higher costs for dairy farms. The Support Program for Reduction of Environmental Burden Due to Dairy Farming, begun in June 1999, pays the "extra costs necessary for dairy farmers to carry out appropriate environmental management" of manure. Payments under this program are related to the size of pasture and forage fields that are part of a dairy farm and support use of manure that does not pollute the environment. Payments were 9.6 billion yen ($77 million) in fiscal year 2002, the latest for which information is available.[9]

Subsidies to consumption. ALIC subsidizes fluid milk sales in elementary and junior high school lunches. In 2002, the last year with available data, the budget for rice, milk, and fruit juice purchases under this program was 5.3 billion yen ($42 million), with most of the expenditure likely devoted to milk.[10] In addition, ALIC subsidizes milk purchases for day care centers, kindergartens, and senior citizen homes.[11]

Insurance subsidies. In 2003, Japan's Government paid 20.71 billion yen ($179 million) in insurance premium subsidies for dairy herds. Insurance is mandatory for all dairy cattle in Japan. Indemnities valued at 41 billion yen ($356 million) were issued to farmers in 2003 for 115,000 dead animals and over 1 million cases of disease or injury that did not lead to death.[12]

The insurance is part of a three-tiered national system that includes a local level (a municipality or insurance association) and prefectural and national levels. Normally, the local level indemnifies dairy farmers for losses, drawing on premiums that are paid 50 percent by farmers and 50 percent by the Government. If losses are so great that they overwhelm local funds, additional indemnities are fully paid by the national and prefectural agricultural insurance agencies, with general budget funds if necessary.

Dairy farmers must insure all of their animals. Farmers can decide what level of insurance coverage to buy, with 20 percent of the total value of the livestock being the minimum, and 80 percent the maximum coverage. The premium rates are revised every 3 years. A minimum rate is determined by MAFF, based on past damage rates in each local insurance area. Local associations can decide to charge a higher rate than the MAFF minimum, and rates can vary by farm.[13]

Reinsurance is provided by the Government (50 percent), prefectural insurance federations (30 percent), and the local associations (20 percent).[14] The Government paid out 15 billion yen in reinsurance indemnities to the local associations in 2003 ($126 million).[15] If there is an "extraordinary" circumstance, the national Government pledges to supply all the reinsurance.[16]

[9]WTO, Domestic support notifications by Japan.

[10]WTO, Domestic support notifications by Japan.

[11]MAFF, 1997.

[12]MAFF, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, 2003-2004, p. 739.

[13]NAIA, 2005, p. 12.

[14]NAIA, 2005, p. 14.

[15]MAFF, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, 2003-2004, p. 739.

[16]NAIA, 2001.

Border Policies

Tariff and tariff-rate quotas (TRQs) are the two main instruments for border protection. TRQs are relatively complex, in part because of the many subtle differences among products, as well as the complexity of the rules governing their administration. Japan has also used special WTO-negotiated safeguards to slow import growth by temporarily raising tariffs on some products.

Tariffs. The basic legislation is Japan's Customs Tariff Law, which sets the bound rates as agreed to in the Uruguay Round (UR) Agreement on Agriculture. Each year, a temporary amendment to that legislation, known as the Temporary Tariff Measures Law, is passed to fix certain tariffs at lower rates. For that year, the temporary rates supercede the bound rates. Dairy product tariff rates are set out in table 2 for products for which there are no quotas.

Tariff-rate quotas. Most dairy products are subject to TRQ systems. Two relatively large TRQs cover multiple products while a number of smaller quotas are specific to just one product type. One of the large TRQs is reserved for purchases by ALIC, the state trading enterprise.

Table 2
Japan tariffs on selected dairy products for which there are no quotas

Product	Tariff rate
	Percent
Cheese not used for further processing in Japan	
Fresh cheese	
Pieces < 4g, package > 5kg, dry matter <48%, frozen	22.4
Other	29.8
Grated/powdered cheese	
Made from processed cheese	40.0
Other	26.3
Processed cheese	40.0
Blue-veined cheese	29.8
Other cheese	29.8
Frozen yogurt	
Packaged	26.3
Other	29.8
Whipped cream in pressurized containers	25.5
Ice cream	
With added sugar, sucrose <50%	21.0
With added sugar, sucrose >50%	29.8
Without added sugar	21.3
Casein	0
Milk albumin	2.9

Note: This is not an authoritative source for Japan's tariffs (refer to Custom Tariff Schedules of Japan).
Source: Compiled by USDA's Economic Research Service from Japan Tariff Association, 2003.

Purchases within the TRQs are assessed a simple, ad valorem tariff. Purchases outside the quota usually face a combination of an ad valorem tariff and a specific tariff, measured in yen per kilogram (table 3). In the case of one state-traded TRQ, ALIC also has the right to mark up prices before reselling into Japan's market.

Tariffs vary according to the proportion of fat in dairy products and the presence of added sugar. Because Japan has tight controls on the sugar market, sugar is much less expensive outside its borders. Sometimes it is more profitable for companies to import products containing sugar than to buy sugar inside Japan and make the product in Japan. Higher tariffs on products with added sugar are an attempt to forestall such imports.

Within quotas, tariffs range from 0 to 35 percent, with the 35-percent rates applicable for products containing added sugar and for high-fat products. Tariffs of zero within the quotas apply to milk powder for school lunches, which lowers the costs faced by schools; milk powder and whey for feeding, which lowers the costs of livestock producers; and natural cheese for processing, which allows domestic manufacturers of processed cheese tariff-free access to raw materials. These TRQs are set large enough so that they do not normally fill. The over-quota tariffs applying to these products are presumably meant to discourage importing the products without supervision and supplying them to markets besides the three favored markets. Other TRQs on products with high over-quota tariffs are also not consistently filled. As noted by Choi and Sumner (2000), this effect is attributed to rules for administering TRQs rather than a lack of underlying market demand for the imported products.

Quota for designated dairy products for general use. The largest dairy TRQ (137,202 tons) is reserved for trade by ALIC and includes a number of dairy products. The ALIC decides which products to import. The quantity of the quota is expressed in whole-milk equivalent and is obtained by summing products converted to their whole-milk equivalent. For example, the quantity of skim milk powder is multiplied by 6.48 to get the whole-milk equivalent.[17] The quota applies to skim and whole-milk powder, condensed milk, buttermilk powder, butter and butteroil, and whey. The quota is usually almost fully used. Within the quota, there is a special subquota for 4,500 tons of whey for food use.

[17]Factors for converting dairy products to whole-milk equivalent are specified in Japan's schedule submitted at the conclusion of the Uruguay Round.

Quota for other dairy products for general use. This TRQ, in which private companies can participate, is also defined on a whole-milk equivalent basis (133,940 tons). It covers milk and cream, yogurt, buttermilk powder, assorted products consisting of milk constituents, food preparations for infant use, preparations with a basis of coffee or tea, and certain other food preparations with a high dairy content. The quota is usually almost filled each year. Ice cream mix powder has a subquota of 3,700 tons.

Product-specific quotas. Eight TRQs for dairy products are more narrowly defined (see table 3 for more detail).

- *Skimmed milk powder for school lunch* is allocated a TRQ of 7,264 tons. In 2003, 2,907 tons were imported within this quota. A zero tariff applies within the quota. According to Shaw and Love (2001), the quota

Table 3

Dairy product quotas in Japan

Item	Quantity		Tariffs				Maximum markup	Special features
	Actual in-quota imports, FY2003	Tariff-rate quota	In-quota tariff	Over-quota tariff: sum of ad valorem and specific tariffs		Over-quota equivalent		
	Tons		*Ad valorem percent*		*Specific yen/kg*	*Percent*	*Yen/kg*	
Skim milk powder for school lunch	2,907	7,264						
Fat<1.5%			0	0	92	38		
Fat>1.5%			0	0	99	NA		
Skim milk powder, other purposes	35,418	85,878						
For feed use			0	0	92	54		
Fat<1.5%			25, 35	21.3, 29.8	92	75		Higher tariffs if sugar added
Fat>1.5%			25, 35	21.3, 29.8	99	25		
Evaporated milk	1,461	1,585						
Fat<8%			25	25.5	254	116		
Fat>8%			30	25.5	509	257		
Whey and modified whey for feeding	22,774	45,000	0	29.8	99	171		Tariffs are higher for higher fat products
Prepared whey for infant formula	10,471	25,000	10	29.8	99	171		
Butter and butteroil	225	1,873	35	29.8	179	119		
Mineral concentrated whey	3,730	14,000						
Fat<5%			25, 35	29.8	99	65		Higher tariffs if sugar added
Fat>5%			25, 35	29.8	135	134		
Prepared edible fat	18,909	18,977	25	29.8	1,159			
New Zealand quota		11,550				444		
General quota		7,427				557		
Other dairy products for general use	132,040	133,940						Whole-milk equivalent
Milk and cream[1]			25	21.3	635	510		Higher ad valorem tariffs than shown if sugar added; higher specific tariffs apply to higher fat products not listed
Yogurt, except frozen			25	29.8	915	NA		
Buttermilk powder			25	29.8	92	59		
Products consisting of milk constituents (0404.90)			25	29.8	400	220		
Food preparations for infant use (1901)			25	23.8	679-1,159	NA		
Preparations with a basis of coffee or tea (2101)			25	29.8	679-1,159	NA		
Other preparations (2106)			21	29.8	1,159	493		Lower specific tariff if a lower fat product
Subquota for ice cream mix powder		3,700	21	29.8	679			

See notes at end of table.

Continued—

Table 3
Dairy product quotas in Japan—continued

Item	Quantity		Tariffs				Maximum markup	Special features
	Actual in-quota imports, FY2003	Tariff-rate quota	In-quota tariff	Over-quota tariff: sum of ad valorem and specific tariffs		Over-quota equivalent		
	Tons		*Ad valorem percent*		*Specific yen/kg*	*Percent*	*Yen/kg*	
Designated dairy products for general use	126,258	137,202						Whole-milk equivalent; state trading
Skim powder			25	21.3	92	65	313	Higher ad valorem tariffs than shown if sugar added; higher specific tariffs and markups apply to higher-fat products not listed
Milk powder, >1.5% fat			30	21.3	99	68	503	
Condensed milk			30	25.5	55	31	205	
Buttermilk powder[2]			25	29.8	123	47	473	
Butter and butteroil			35	29.8	179	119	830	
Whey and modified whey			25	29.8	99	88	306	
Whey for food use		4,500						Simultaneous buy-sell system
Natural cheese for processing	39,318		0	29.8	0			Annual cabinet order determines quota size

Notes: This is not an authoritative source for Japan's tariffs or quotas (refer to Custom Tariff Schedules of Japan). Over-quota tariffs are those applied in 2000, often temporary rates. Bound rates are often higher. NA means not available because no trade was observed in the category, so that no import unit value could be obtained with which to calculate a tariff equivalent of the compound tariff. Tariff equivalents (in percent) were calculated by adding the ratio of the specific tariff to the average import unit value of imports under the HS line, multiplied times 100, to the ad valorem component of the tariff.

[1]For cream or milk containing from 6 to 45 percent fat. Lower rates apply for lower fat milk, and higher rates for higher fat cream.

[2]For buttermilk powder containing from 1.5 to 26 percent fat. Lower rates apply for lower fat powder, and higher rates for higher fat powder.

Sources: Compiled by USDA's Economic Research Service from Japan Tariff Association (2003); Japan Tariff Association, Official trade data of Japan; and Government of Japan (1995).

is not filled because "imports are only available to historical distributors" and not to any firm that wishes to trade in the powder.

- *Skimmed milk powder for other purposes than for school lunches* has a TRQ of 85,878 tons. In 2003, 35,418 tons were imported within this quota. Within the quota, various tariff lines have different tariffs:
  - 0, for powder for feed use;
  - 25 percent, for powder not for feed use, and not containing added sugar;
  - 35 percent, for powder not for feed use, but containing added sugar.

  Most trade (in 2003, 98 percent) in this quota is for powder for feed use. Shaw and Love (2001) note that "import end use is restricted to animal

feed producers and recombined milk producers in Okinawa," and that this end-use limitation leads to the quota being underfilled.

- The TRQ for *butter and butteroil* is 1,873 tons per year. In 2003, 225 tons were actually imported within this quota. Within the quota, the tariff is 35 percent for all three tariff lines included within the quota. Shaw and Love (2001) report that the quota "can only be used by producers of recombined milk in Okinawa, exhibitors at international exhibitions, and food suppliers to international airlines." This restriction, and the small size of the quota, account for its limited use.
- *Prepared edible fats* containing between 30 and 70 percent butter and butteroil have a TRQ of 18,977 tons, which was virtually filled in 2003 by imports of 18,909 tons. These dairy fats and oils share much the same market as butter and butteroil. The quota is divided between a portion reserved for imports from New Zealand (11,550 tons) and a portion for all other countries (7,427 tons). The tariffs (for all countries) are 25 percent for in-quota imports and 29.8 percent plus 1,159 yen/kg for over-quota imports.
- *Evaporated milk* has a TRQ of 1,585 tons per year, with actual imports of 1,461 tons in 2003. In-quota tariffs are 25-30 percent.
- Three specific TRQs apply to *whey*:
    - *Whey and modified whey for feeding purposes* has a quota of 45,000 tons. Within the quota, the tariff is zero. Actual imports under the quota were 22,774 tons in 2003.
    - *Prepared whey for infant formulas* has a TRQ of 25,000 tons. Actual imports in 2003 were 10,471 tons. Within the quota, the tariff is 10 percent.
    - *Mineral concentrated whey* has a TRQ of 14,000 tons. In 2003, 3,730 tons were actually imported. Tariffs within the quota are 25 percent.

Safeguards. Japan has used safeguard actions under WTO rules several times to slow growth in dairy product trade. For example, in 2001, six out of eight safeguard actions initiated by Japan related to dairy products. Under the UR Agreement on Agriculture, safeguards are increases in tariffs that can be invoked when either increases in trade volume or decreases in market prices exceed defined trigger points.

Volume-based safeguard actions, in most cases, involve imports that exceed by 25 percent the average of the previous 3 years. For example, if by June 15 in a given year imports exceed 125 percent of the average annual imports of the last 3 full fiscal years, Japan's Government could raise duties facing the product in question. The additional duties can be as high as one-third of the duties that otherwise apply, and they can be applied until the end of the fiscal year (April 1-March 31) in which they were invoked.

Price-based safeguard actions are triggered when a market price falls more than 10 percent below the average price of the 1986-88 base period. When prices fall by more than 10 percent from the base level, the amount of the additional duty depends on the severity of the price drop. For price drops

between 10 and 40 percent, the additional duty is 30 percent of the difference between the observed price and a price 10 percent below the base.

Japan has used both volume and price criteria in its actions (table 4). The number of actions does not show a tendency to increase over time. The six safeguard actions taken in 2001 were the largest number taken in any year since 1995.

Table 4
Dairy safeguard actions in Japan

HS lines	General category	Year of action										Applied tariff equivalent, 2001
		1995	96	97	98	99	2000	01	02	03	04	
0401.20-190 volume	Fluid milk and cream		X					X			X	64
0401.30-119 and -129 volume	Fluid milk and cream		X	X				X				198 and 140
0402.10-129 price	Milk powder, fat<1.5%	X										109
0402.21-119 price	Milk powder, 5%<fat<30%					X	X			X		36
0402.99-129 and -290 volume	Condensed milk			X	X	X						35
0402.99-129 price	Condensed milk							X		X		106
0403.90-113 and -118, -123, -133, -138 volume	Buttermilk and other fermented milk and cream		X				X	X				47 to 196 or 154
0404.10-149 price	Whey	X										193
0405.10, 0405.20, 0405.90 volume	Butter and other dairy spreads									X		114
0405.10-129 price	Butter						X		X			55
0405.90-190 and -229 price	Oils derived from milk							X		X		142
2106.90-129 price	Preparations containing not less than 30% milk constituents on a dry matter basis				X	X		X	X	X	X	142

Note: HS stands for Harmonized System, and HS lines refer to individual tariff lines in Japan's tariff schedules. Applied tariffs are compound tariffs—the sum of an ad valorem tariff (in percent) and a specific tariff (in yen/kg). Tariff equivalents (in percent) were calculated by adding the ratio of the specific tariff to the average import unit value of imports under the HS line, multiplied times 100, to the ad valorem component of the tariff.

Source: Compiled by USDA's Economic Research Service from WTO, Annual notifications on the use of special safeguard provisions by Japan, and Japan Tariff Association, Official trade data of Japan.

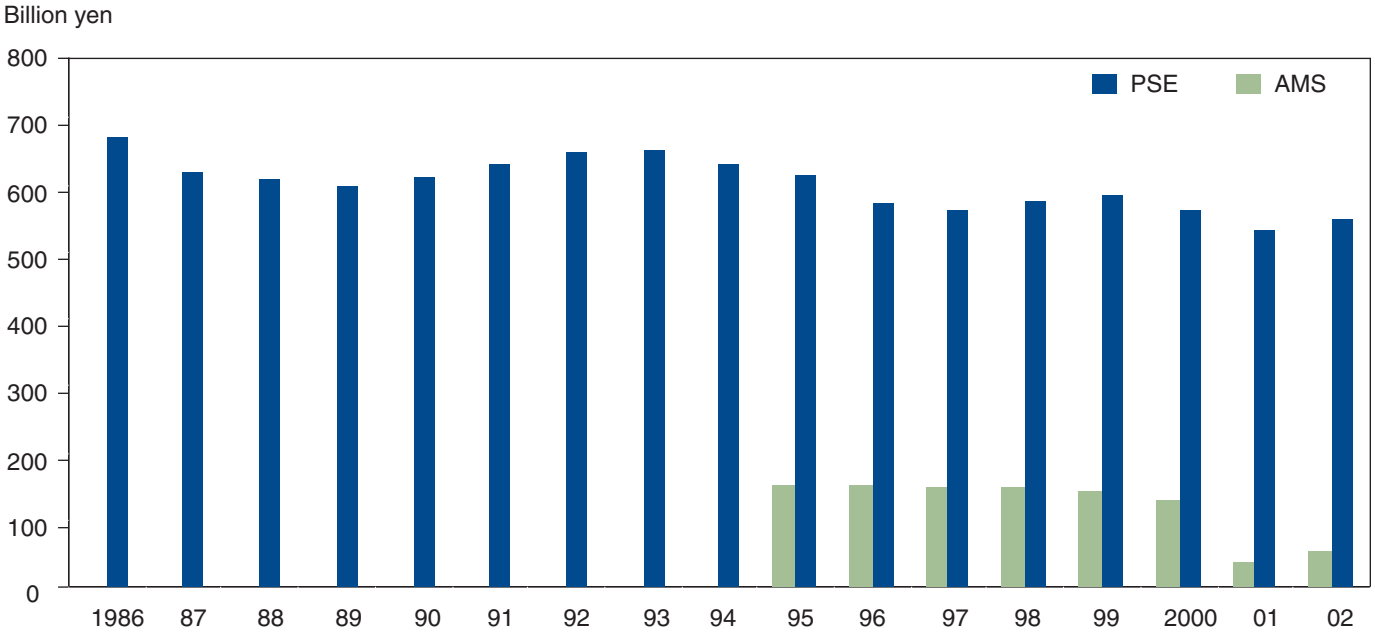
Aggregate Measurement of Support and Producer Support Estimate

Attempts to develop measures of the overall level of support that Japan's policies provide for the dairy sector are sensitive to the scope and definition of the measure itself, as well as the methodology used to compute it. The two key measures—the Aggregate Measurement of Support (AMS) and the Producer Support Estimate (PSE)—give significantly different results, primarily because the AMS does not include border measures. The most recent PSE, which is the more comprehensive measure, is nearly 10 times larger than the AMS.

Each year, Japan's Government calculates the AMS to satisfy the WTO requirement that Japan report its domestic support for agriculture. The Organisation for Economic Co-operation and Development (OECD) calculates the PSE each year to estimate Japan's government support for agriculture. Both of these measurements include estimates of government support to dairy farming in Japan (fig. 4). The AMS is an indicator of domestic support that influences production choices by farmers (the WTO refers to this as "amber box" support). The PSE is intended to measure domestic and border support of all kinds, even if the support does not influence production choices. In 2002, Japan calculated the milk AMS as 53.6 billion yen ($427 million). The OECD's PSE estimate for milk was 550 billion yen ($4.74 billion) in 2002.

Japan's AMS (from 2001 onward) measures just government expenditures on milk that are considered amber box support because they are considered to

Figure 4
Japan: PSE and AMS for milk



Note: PSE = Producer Support Estimate. AMS = Aggegate Measurement of Support.
Source: Compiled by USDA's Economic Research Service from WTO, Domestic support notifications by Japan, and OECD (2004).

distort farm production decisions. The AMS includes the direct payments for milk for manufacturing (see page 5), payments for milk for cheese and cream production, and payments under the government/producer emergency fund (see box, "How Japan Notifies Its Domestic Dairy Policies to the WTO").

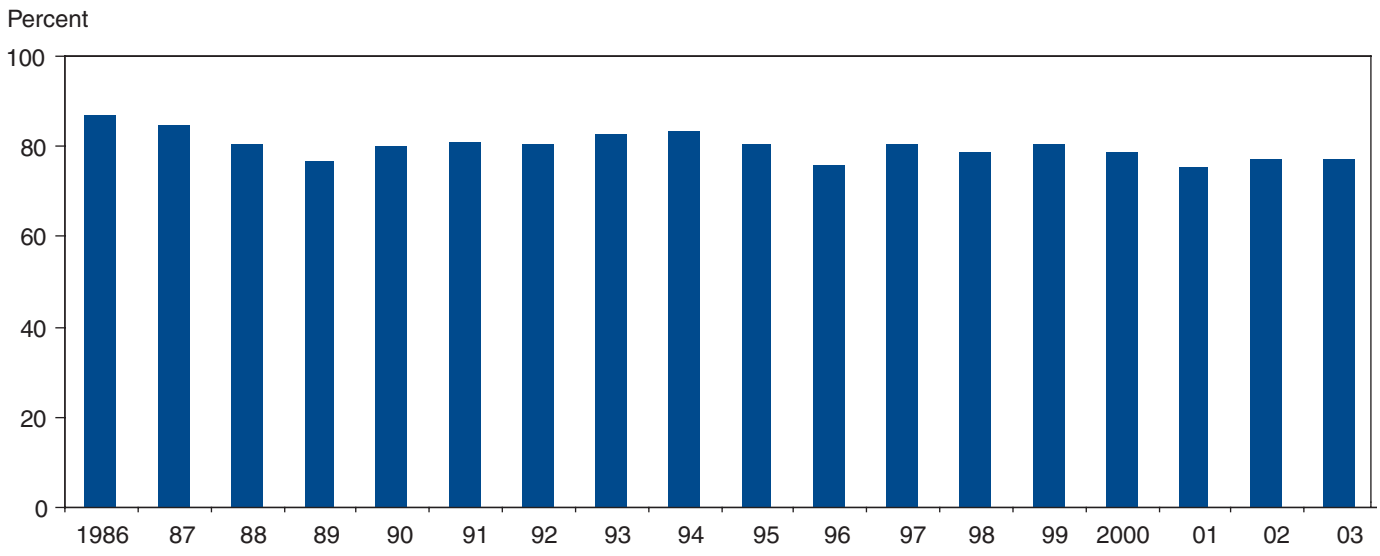
To calculate the PSE, the OECD uses the concept of market price support, which measures the gap between prices inside and outside Japan. The gap is caused by several factors, but the two most important are (1) the difficulty in transporting fresh, fluid milk long distances to reach Japan from exporting countries, which tends to insulate Japanese drinking milk prices from world prices; and (2) Japan's high barriers to imports of basic milk products, such as milk powder and butter.

The OECD uses a reference price based on New Zealand milk and compares it with the farmgate producer price for all milk in Japan. The gap is then multiplied by total milk production.

The two measurements also differ in that the PSE includes "green box" support—payments that are not considered to have much influence on production decisions and are not part of the AMS. Green box expenditures are often spread across different farm activities and are not devoted just to dairy production. The 2003 PSE assigns 29.3 billion yen ($253 million) of green box support to dairy production.

The PSE estimate of 552 billion yen (from all kinds of support) in 2003 represents most of the total farmgate value of milk production in that year. Over the years 1986-2003, the percentage PSE (the PSE divided by the value of milk) has varied between 76 and 87 percent. The percentage was 77 percent in 2003, the most recent year (fig. 5). This indicates that a large part of the value of Japanese milk production relies on government interventions, either through barriers to imports or through subsidies to farmers.

Figure 5
Production support estimate as a share of the value of production of milk in Japan



Source: Compiled by USDA's Economic Research Service from OECD (2004).

How Japan Notifies Its Domestic Dairy Policies to the WTO

Policy	Box	WTO category	Value
General and product-specific animal health control for livestock and animal medicine inspection	Green	Animal health control	[$72.57 million for all domestic animals]
Infrastructural services, extension and advisory services on technologies, and information services for promotion of livestock products	Green	General services including extension and infrastructure	[$837.32 million for all domestic animals]
Interest concessions for agricultural loans	Green	Structural adjustment assistance	[$248.8 million for all agricultural enterprises]
Payments to dairy farmers who practice appropriate management to tackle environmental problems	Green	Environmental program	$76.56 million
Supply of rice, milk, and fruit juice for schoolchildren at subsidized prices	Green	Domestic food aid	[$38.28 million for rice, milk, and juices]
Direct payment to farmers when manufacturing milk prices fall below a historical average	Amber	Payments related to the price of milk	$21.53 million
Includes direct payments to farmers for milk produced within the production quota for manufacturing milk or quotas for cheese and cream	Amber	Payments related to the volume of milk production	$405.9 million
Payments for slaughtering sows and cows to avoid overproduction of pork and milk	Green	Structural adjustment assistance provided through resource retirement programs	[$0.2 million for swine and dairy cattle]
Disaster insurance subsidies	Green and amber [1]	Green: payments for relief from natural disasters: subsidies on premiums of agricultural insurance for production loss more than 30 percent of average levels. Amber: subsidies on premiums of agricultural insurance for production loss less than 30 percent of average levels.	[$162.68 million for amber box payments to producers of all crops and livestock]

Notes: Brackets indicate that the subsidy amount is divided among several farm activities, not just dairy farming. The amber box contains policies that tend to distort international trade, and which are subject to reduction commitments under the Uruguay Round Agreement on Agriculture (URAA) of the WTO. The green box contains policies that are regarded as minimally trade distorting and not subject to reduction under the URAA.

[1] Premium payments for insurance coverage for losses less than 30 percent for all commodities (not just rice) were 20.4 billion yen ($163 million) in 2002, which was 0.2 percent of the value of Japan's total agricultural output, and thus considered de minimis and not counted as part of Japan's total Aggregate Measurement of Support because the payments were less than 5 percent of the value of production.

Sources: WTO, Domestic support notification by Japan for 2002, and interviews with MAFF officials in Tokyo, June 20, 2003.

However, the barriers to dairy trade in Japan include Japan's distance from foreign sources of drinking milk. This constraint can be considered a natural or geographic barrier, rather than a barrier set up by government policies. If the PSE methodology for calculating market price support were applied just to Japan's output of milk for manufacturing (which faces competition from easily traded milk products like powdered milk and butter), and the domestic program spending were added, the subsidy equivalent would be about 228 billion yen in 2002 ($1.82 billion). The difference between this estimate and the AMS calculated by Japan for 2002 (the last year available) is 174 billion yen ($1.41 billion). Since both the PSE and AMS include the taxpaid subsidies to manufacturing milk production, the difference between the estimated PSE for manufacturing milk and the AMS is a rough estimate of market price support for manufacturing milk, which is provided by border measures.

Market Implications

Japan's consumers bear much of the cost of Japan's dairy policies in the form of higher prices and reduced choice. Higher prices also depress consumption, reducing market opportunities for some domestic suppliers, as well as potential trading partners. This section explains some of the links between policies and market conditions, and then explores quantitative estimates of the potential outcomes if Japan reduced support for milk production.

Prices. National, average data on retail milk prices in Japan are scarce. Drinking milk prices for 1-liter cartons sold in supermarkets ranged from less than 150 yen/liter ($1.32/liter or $5.00/gallon) to over 250 yen/liter ($2.2/liter or $8.33/gallon) in 1999, with an average of 190.3 yen/liter ($1.67/liter or $6.34/gallon).[18] In the same year, the average U.S. price in urban areas was $2.84/gallon.[19] The price to consumers in Japan was 2.23 times that in the United States.

Since 1999, average retail milk prices are not available for Japan. However, the Government's Retail Price Survey reports prices for various cities. In 2003, the prices for a liter of whole milk sold in stores in various Japanese cities ranged from 176 yen to 223 yen. The price in Tokyo, the largest urban market, was 206 yen ($1.78/liter, or $6.74/gallon). The Tokyo price was 2.44 times higher than the urban average price for 2003 in the United States ($2.76).[20]

Several factors explain at least part of the difference in prices in the two countries. First, Japan's prices are quoted for a 1-liter carton, roughly equivalent to a U.S. 1-quart carton, and the U.S. price used for comparison was for a 1-gallon carton. Higher packaging costs for smaller containers are embedded in the Japanese price. Second, the relatively small size of most dairy farms also leads to higher costs, preventing them from achieving economies of size by spreading labor and capital over a larger number of cows.[21] Third, according to Kobayashi (2000), the size of milk bottling plants in Japan is smaller than in North America (and Europe). The smaller size could mean that costs per unit of output are higher than in larger plants. Fourth, Japan's milk production in part relies on imported grains, protein meals, and roughage. The transport costs for these feeds are reflected in milk costs and prices.

Farm prices for milk in Japan are high. In 2003, the average price (not including tax) was 788 yen/10 kg ($0.68/kg, or $2.65/gallon). In 2004, the milk price for U.S. farmers was $1.38/gallon.[22] The price difference between the farm price and the retail price was $3.52 in Japan in 1999 (the last year with available data) and $2.08 in the United States.[23] Thus, the farm price was about twice as high in Japan as in the United States, and the farm-retail price margin was 1.69 times as high. It is evident that costs in Japan are high, relative to the United States, both for raw milk on the farm and for the processing and distribution activities necessary to get the milk to consumers.

Dairy products made from milk are easier to trade among countries than fresh drinking milk. In 2004, the average retail price of butter in Tokyo was

[18]Japan Dairy Council, 2001, pp. 8-9.

[19]Data compiled by USDA/ERS from U.S. Department of Labor, Bureau of Labor Statistics data.

[20]Data compiled by USDA/ERS from U.S. Department of Labor, Bureau of Labor Statistics data.

[21]The average number of cows per farm was 58.7 in a February 2004 survey. ALIC, March 2005, p. 27.

[22]Derived using data from USDA/ERS, 2005b, p. 17. Farm prices were even lower in Australia: in the 2003/2004 crop year, the average farmgate price was $0.73/gallon for Australian farmers. ABARE, 2002, p. 270.

[23]Derived from data in USDA/ERS, 2005a.

1,602 yen/kg ($6.72/lb.).[24] Over the same period, the U.S. retail butter price was $3.49/lb.[25] The ratio of Japan's price to the U.S. price was 1.93. At wholesale, Japan's average butter price in 2004 was 955 yen/kg.[26] The average import unit value was 259 yen/kg ($1.09/lb.).[27] The difference between the wholesale price and the import unit value is likely to reflect mostly the trade barrier imposed by the TRQs. The 696-yen/kg difference is equivalent to a 269-percent tariff added to the import unit value of butter. The margin (i.e., difference) between wholesale and retail butter prices in Japan averaged 660 yen/kg in 1999-2003. If that same margin, which represents nonagricultural costs, were added to the unit value of imported butter, the retail price would be 919 yen/kg ($3.85/lb.), 43 percent lower than the observed price in Tokyo.

[24]ALIC, March 2005, p. 27.

[25]Data compiled by USDA/ERS from U.S. Department of Labor, Bureau of Labor Statistics data.

[26]ALIC, March 2005, p. 27.

[27]Japan Tariff Association, Official trade data of Japan.

Skim milk powder is a widely traded dairy product that is used as an ingredient in many other foods. The wholesale price of the powder in Japan was 541 yen/kg ($2.12/lb.) in 2003.[28] The unit value of imported skim milk powder in 2003 was 191 yen/kg.[29] The difference, 350 yen/kg, is equivalent to an additional 183 percent of the import unit value. Most of the difference is likely to represent the effect of the TRQs that tightly regulate skim milk powder imports into Japan and prevent unlimited competition from less expensive powder produced elsewhere from reducing Japan's wholesale price.

[28]ALIC, March 2005, p. 27.

[29]Japan Tariff Association, Official trade data of Japan.

Gains and losses. Producers of manufacturing milk in Japan benefit from TRQs that limit imports of dairy products. The milk equivalent of imported dairy products, 3.925 million tons, is larger than the manufacturing milk produced in Japan in 2003, 3.279 million tons.[30] The remaining manufacturing milk production would be likely to shrink rapidly if TRQs and high tariffs were removed. Japan's dairy farmers gain a large market for their milk through current border measures. In addition, supply control through the drinking milk quota raises internal Japanese prices. Because demand for drinking milk in Japan is relatively unresponsive to price changes, the quantity demanded would drop relatively little, even if prices rose. Therefore, the supply quota is valuable to dairy farmers, providing higher prices and only marginally reduced volumes—by jointly reducing supply slightly, farmers can sell their milk for a higher price, with each gaining a higher revenue for drinking milk output than would be the case without the quota.

[30]For the milk equivalent of imports, Food Balance Sheet data reported in MAFF, *Statistical Yearbook of Agriculture, Forestry and Fisheries*, 2003-2004, p. 684. For manufacturing milk production, USDA/FAS, 2005.

Consumers pay. Japan's consumers pay much more for milk products and drinking milk than consumers in other developed countries. The OECD (2004) estimated the extra cost of relying on Japanese milk production at 495 billion yen ($3.95 billion) in 2002. For a household of four people, the cost would be $124 each year, on average. In part, these higher costs stem from the structure of Japan's agriculture and the country's distance from countries with surplus supplies of fresh milk, which limits the possibilities for transporting drinking milk without special heat treatments. However, high prices for manufactured milk are the result of Japan's TRQs, which allow prices of dairy products inside Japan to be considerably more than the prices of imported products of the same quality. Prices for drinking milk are higher because the voluntary producer quota overseen by the JDC limits

efficient farms from producing more milk and competing for a greater share of the market by lowering prices.

Tariffs account for a portion of the higher costs paid by consumers that can be directly measured. Cheese, for example, constitutes over 70 percent of the value of Japan's dairy imports. In FY2004, Japan imported 76 billion yen worth of cheese and charged 19 billion yen ($179 million) in tariffs on these imports.[31] Presumably, the cost of the tariffs was eventually paid by consumers.

[31]Estimated by USDA/ERS from data in Japan Tariff Association, Official trade data of Japan, and Japan Tariff Association, 2003.

Trade. Japan's border measures place serious barriers to imports of milk products, especially nonfat dry milk and butter. As consumption of nonfat dry milk has fallen in recent years, adjustment to supply has come chiefly through reduced imports (see fig. 3). High-cost Japanese production has been mostly spared from reduction, while low-cost imports have suffered because of the size of the TRQs and their rules for operation. Private-sector imports of nonfat dry milk within the TRQs are limited to feed producers, recombined milk and infant formula producers in Okinawa (population 1.5 million),[32] and a list of historical importers for the school lunch program. With feed use of imports probably already saturated, this sharply limits the ability of private firms to market relatively cheap nonfat milk powder in Japan's large market. Most of the TRQ capacity for nonfat dry milk lies in the large, multiproduct TRQ reserved to ALIC, the government corporation. ALIC is also responsible for trying to keep dairy product prices in Japan stable. In the face of declining consumption of nonfat dry milk, ALIC decided to cease milk powder imports in the TRQ that it administers (see page 6) (table 5). Instead, to satisfy the WTO requirement that the TRQ be filled on a whole-milk equivalent basis, ALIC has imported butter instead of milk powder in recent years. Imports of butter are not being matched by reductions in Japanese production, and consumption is relatively flat (fig. 6), increasing the likelihood for an oversupply of butter.[33]

[32]In 2005, the portion of the quota allocated to Okinawa recombined milk producers is 372 tons and that allocated to Okinawa baby formula producers is 53 tons, according to information compiled by USDA/FAS from Japanese-language tables provided by MAFF.

[33]USDA/FAS, 2004.

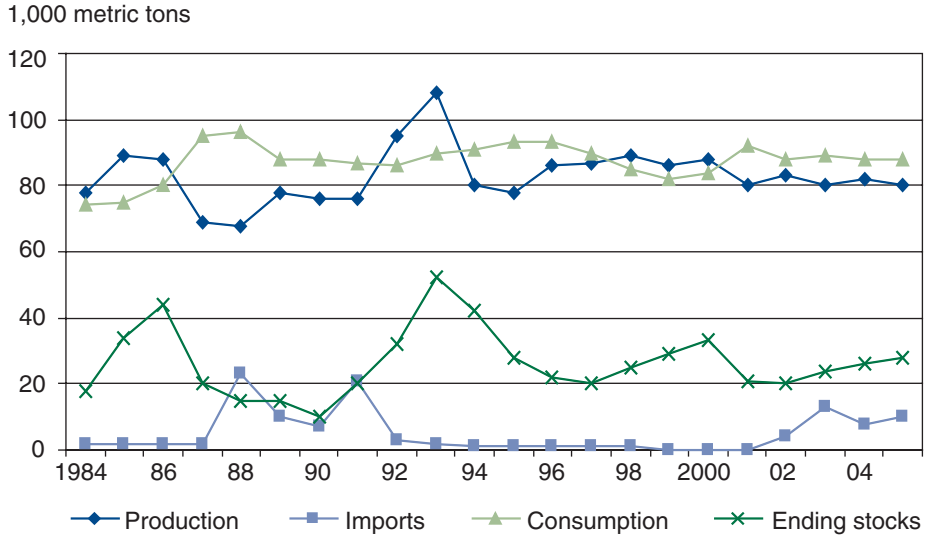
In contrast to imports of nonfat dry milk and butter, which depend on TRQs administered by ALIC, imports of cheese are largely free of TRQs and face only tariffs and government support to milk production for cheese (see page 9). Despite tariff rates exceeding 25 percent, imports have grown strongly (fig. 7).

Table 5
Japan's nonfat dry milk imports

Item	Japan fiscal years										
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Metric tons										
Imports within TRQs	98,260	80,842	71,427	71,699	53,601	53,995	53,771	51,613	38,168	38,375	33,761
Imports by ALIC	42,631	35,150	32,534	28,923	17,036	16,739	16,427	10,246	0	17	0
Imports by others	55,629	45,692	38,893	42,776	36,565	37,255	37,344	41,367	38,168	38,357	33,761
For feed use	50,127	40,419	33,435	37,626	31,964	32,552	32,951	37,244	34,737	34,989	30,511
For school lunch	5,502	4,245	4,615	4,066	3,783	3,804	3,592	3,196	2,643	2,907	2,767
Imports outside TRQs	0	6,008	2,326	1,919	2,130	2,934	1,991	1,595	4,539	1,694	526
Total	98,260	86,850	73,753	73,618	55,731	56,929	55,762	53,208	42,707	40,068	34,287

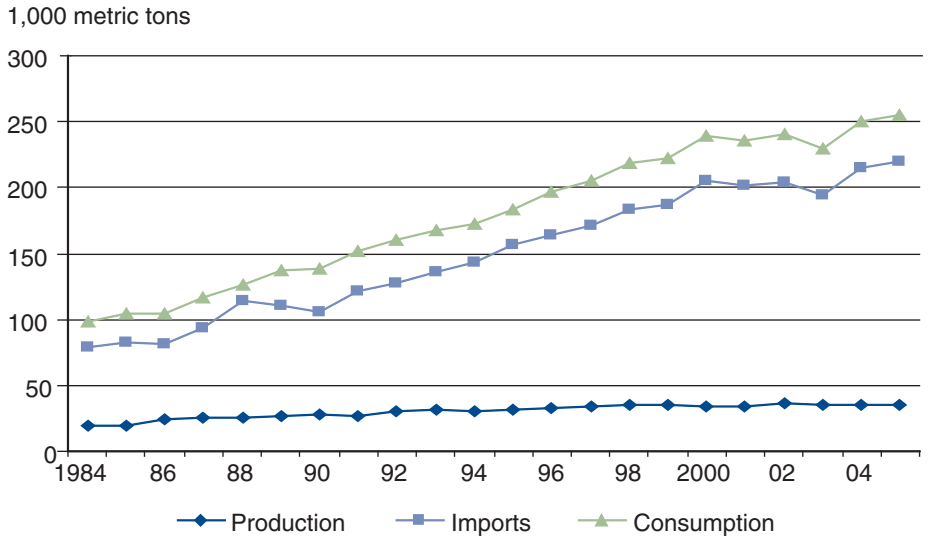
Source: Compiled by USDA's Economic Research Service and USDA's Foreign Agricultural Service from Japan Tariff Association, Official trade data.

Figure 6
Japan's butter market



Source: Compiled by USDA's Economic Research Service from USDA/FAS (2005).

Figure 7
Japan's cheese market



Source: Compiled by USDA's Economic Research Service from USDA/FAS (2005).

Possible effects of liberalization. Japan is already a major importer of dairy products, yet it retains sizable domestic production that it supports with significant trade barriers and domestic subsidies. What might happen if Japan reduced or eliminated the current protection and other support given to domestic production? Impacts inside Japan—for producers, processors, and consumers—and outside Japan—for dairy farmers in exporting countries—could be significant.

Some indications of the possible effects of Japan ending its tariffs and TRQs for dairy products can be determined by examining the current market. In

2004, fluid use of milk accounted for 59 percent of Japan's production. As noted earlier, fluid milk for drinking purposes cannot be transported into Japan without high heat treatment that would sharply limit its potential market. Essentially, about 59 percent of Japan's milk production is not tradable, and this would likely remain unchanged, even if Japan ended all of its border measures. Since both production and consumption of drinking milk fluctuate through the seasons, supplying drinking milk needs could require producing more than annual total consumption—to ensure that there is enough milk for periods with the potential for demand to exceed supply, milk production would have to be higher all year. When milk demand is below the peak, surplus milk would be available for manufacturing purposes. Thus, some milk would be likely to continue to be used for manufacturing, even without protection from tariffs and TRQs, and without the subsidies currently provided from budgetary funds. Depending on assumptions made about how much extra security the dairy industry wants for assuring that peak future consumption will always be met, the annual milk surplus could be from 10-40 percent of total drinking milk consumption (i.e., 500,000 to 2,000,000 tons).[34] This would be equivalent to 15-60 percent of current manufacturing milk production. Following this logic, 65 percent or more of Japan's current total milk production would be expected to survive a full liberalization.

[34]The authors are indebted to James Miller, USDA/ERS, for pointing out and illustrating the need for reserve production.

Quantitative models can also be used to simulate what might happen, given liberalization of the sector in Japan. Dairy market models must reflect a complex set of relationships in which a basic product, milk, is used both directly for drinking and for manufacturing into other dairy products. Among the dairy products, such as milk powder, butter, cheese, and whey, there is competition and substitution to use the fat and nonfat components of milk to make foods, feeds, and industrial materials.

Cox et al. (1999) used a hedonic, spatial equilibrium model of 21 world regions to explore dairy market liberalization scenarios, including complete elimination of support (i.e., free trade). Japan was one of the regions and showed very large changes in its dairy market in the free trade scenario, which assumed a 3- to 5-year adjustment to an initial switch to free trade. Consumers in Japan gained $2.466 billion in the free trade scenario, while producers lost almost $2 billion. Japan's imports of dairy products rose by over $500 million in this scenario. The model used four milk components (milkfat, casein, whey protein, and lactose) and nine final products (milk, skim milk powder, whole milk powder, butter, dry whey, cheese, casein, evaporated/condensed milk, and other dairy products). Results were reported only for the aggregate value of all products.

Shaw and Love (2001) constructed a global dairy model using the dairy component of the OECD AGLINK partial equilibrium model as a basis. Their model included 33 regions, and they reported results for milk, skim milk powder, full cream milk powder, butter, and cheese. Results were reported both for the short run (1 year) and assuming a 3-year adjustment period. Rather than a free trade scenario, Shaw and Love simulated an increase in market access, with all TRQs increased by 50 percent, and all tariffs (including tariffs within and over TRQ volumes) lowered by 50 percent. Domestic policies were assumed unchanged. Under this scenario, Japan's imports of skim milk powder rose by 38.4 percent in volume, after

the adjustment period, with imports for nonfeed use rising and those for feed use falling. Imports replaced domestic production. Butter imports doubled (entering through the edible fat quota). Consumption was unchanged, and domestic production fell to accommodate the increased imports. Cheese consumption rose marginally, supplied by a small increase in imports.

Bull and Roberts (2001) used a general equilibrium model (i.e., including nonagricultural markets and all agricultural markets) to look at agricultural trade liberalization. They modeled a 50-percent reduction in tariff equivalents, domestic support, and export subsidies for 17 regions of the world, one of which was Japan. The reductions were carried out uniformly over 2005-10, and across all the regions. Results are given just for the dairy aggregate, rather than for individual dairy products. Japan's imports of aggregated dairy products doubled at the end of the period, as the price of imported products (after tariffs) fell by almost one-third in Japan. Domestic milk production fell by 8 percent.

An ERS model simulated the response after a few years of adjustment if Japan were to eliminate all of its border protection and its trade-distorting domestic support for all agricultural commodities. The scenario assumed no changes to policies in regions outside Japan.[35]

[35]USDA/ERS and Pennsylvania State University.

The ERS modeling results showed that eliminating the tariffs, the production quotas, and other domestic support would have led to a 12-percent reduction in milk production, as imported dairy products replaced manufacturing milk output. Adjustment is assumed to occur over a few years, following the initial shock of support removal. In the model results, domestic production of skim milk powder and butter declined by over 50 percent. Imports of butter and skim milk powder together rose by $370 million. Cheese imports fell by almost $50 million, as domestic cheese production rose by 48 percent. Producing cheese in Japan became more profitable because the price of milk ingredients in Japan fell. The net dairy trade effect was a rise in Japan's import value of $320 million. As a result of liberalization only in Japan, the world prices of butter, nonfat dry milk, and cheese rose by 4.2 percent, 2.5 percent, and 1.1 percent, respectively.

All the model results detailed here indicate that Japan's support for milk has a modest, negative impact on world dairy trade, as well as a significant impact on consumer prices for, and domestic production of, manufactured milk products in Japan. Current negotiations in the WTO about a new multilateral agreement on agricultural trade may lead to changes in Japan's import regime, with lower trade barriers, and with new disciplines on domestic support to dairy farmers. Such changes are likely to benefit Japan's consumers and foreign milk producers.

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