



Agricultural Issues Center  
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## **Commodity Profile: Dairy Products**

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### **Overview**

The dairy industry is large and diverse in the United States. California emerged in the 1990s as the leading dairy state, followed by Wisconsin. Some parts of the United States, for example in the Northeast and Southeast, tend to specialize in production of milk for local fluid consumption. Other parts of the country tend to specialize in production of hard manufactured products such as butter, nonfat dry milk (NFDM) and cheese. In 2001, about 19 percent of the milk produced in California was used for fluid consumption, and about 72 percent was used for hard products; the rest was used for intermediate products such as yogurt, sour cream and ice cream (CDFA, California Dairy Statistics and Trends, 2001).

In 2002, California led the nation in total milk production with 34.9 billion pounds, up from 22 billion in 1992. Wisconsin produced 22.1 billion pounds in 2002. California had 1.65 million milk cows (18 percent of the U.S. total) in 2002, compared to 1.18 million in 1992. Wisconsin had 1.27 million in 2002, almost 14 percent of the U.S. total. California increased its share of U.S. milk production from 14.6 percent in 1992 to 20.5 percent in 2002. Wisconsin, the nation's second largest producer, lost share from 16 percent to 13 percent during the same period. Other important dairy states in total milk production are New York, Pennsylvania and Minnesota.

California ranked first in nonfat dry milk production, first in butter, and second in cheese production in 2002. Wisconsin ranked first in cream production, and first in cheese production, producing over 2.1 billion pounds (26 percent) of the nation's cheese. In 2002, California produced almost 48 percent of the nation's nonfat dry milk, 28 percent of the butter, and 20 percent of the cheese.

### **Trade**

Trade is relatively unimportant for the U.S. dairy industry. Exports account for only about 5 percent of total production on a milk equivalent basis, and imports are only slightly higher than exports.

Major export products for the United States include dry milk, cheese, butter and other processed dairy products such as whey, ice cream and yogurt.

Mexico is the largest market for U.S. dairy exports, accounting for 21.4 percent, closely followed by Canada, which accounted for 20.7 percent in 2002. Japan, Korea and China are other important markets for U.S. dairy exports.

Dairy trade in the United States is often subsidized, but there have been small amounts of unsubsidized exports of butter and nonfat dry milk powder (Economic Research Service/USDA).

The Dairy Export Incentive Program (DEIP) has helped exporters meet prevailing world prices for targeted dairy products, in essence milk powder, butterfat and cheddar, mozzarella, Gouda, feta, cream, and processed American cheeses. Under the DEIP, the U.S. Department of Agriculture pays cash to exporters as bonuses, allowing them to sell dairy products at prices lower than the costs of acquiring them. Objective of the program is to develop export markets for dairy products where U.S. products are not competitive because of subsidized products from other countries. The DEIP has existed since 1985, was reauthorized by the Food Agriculture, Conservation, and Trade Act of 1990 and was extended through 2007 by the Farm Security and Reinvestment Act of 2002. Under its Uruguay Round obligations, the United States agreed to establish an annual export subsidy ceiling by commodity. Since fiscal year 2000, ceilings on dairy exports have been 3,030 metric tons for cheese, 68,201 metric tons for nonfat dry milk, and 21,097 metric tons for butter.

In fiscal year 2002, bonuses totaling \$931,775 were awarded for 1,222 metric tons of cheese. The bonuses for 85,251 metric tons of nonfat dry milk (NFDm) amounted to \$53.7 million. The major markets assisted in 2002 included the Caribbean, Central and South America, Asia and the former Soviet Union region. In the past, exports of NFDm to Mexico have also benefited from the DEIP.

Before NAFTA and the Uruguay Round WTO agreement, the United States had rigid dairy product import quotas to shield milk prices from the international market. With the agreements, the United States consented to move to tariff-rate quotas (TRQ) for dairy products. Most import tariffs or quantitative restrictions on Canadian dairy products were phased out over 10 years and reached zero in 1998. The United States and Canada are still engaged in a dispute on milk trade and the conversion of quotas to TRQs under the Uruguay Round. Under NAFTA, Mexico and the United States replaced their respective import restrictions with tariff rate quotas for most dairy products. These are being phased out over 10 years, beginning in 1994, or over 15 years for U.S. NFDm exports to Mexico.

U.S. dairy trade has risen substantially over the last decade. The value of exports rose from \$432.1 million in 1989 to almost \$1.1 billion in 2001 (Figure 1). Exports declined in 2002, with the United States shipping \$948.5 million. Imports rose from \$828.6 million in 1989 to \$1.6 billion in 2001 but fell to \$1.5 billion in 2002.

In 2002, \$202.6 million, or 21 percent, of U.S. dairy exports went to Mexico (Table 1). The value of exports to Mexico were \$245.2 million in 1993, the year before NAFTA, but decreased to \$109.5 million in 1996, in part as a consequence of the Mexican economic crisis. Exports recovered during the second half of the 1990s, rising to a peak of \$250.6 million in 2001.

Historically, one of the most important export sectors in the United States has been NFDm. Mexico was the United States' largest trading partner for NFDm. NFDm exports to Mexico fell from \$116.7 million in 2001 to \$64.1 million in 2002. The second

largest sector was cheese, where Mexico was, again, the most important export destination. Of the \$160.4 million in cheese exports, \$41.8 million went to Mexico. Whey products at \$26.9 million and fluid milk at \$14.2 million were also important dairy exports to Mexico. While cheese and whey exports to Mexico have increased during NAFTA, fluid milk has lost export share. Butter exports to Mexico have decreased dramatically. In 1989, butter was one of the most important exports to Mexico, with exports valued at \$22.6 million; by 2002, exports were down to \$602,445.

Exports to Canada, the United States' second largest trading partner for dairy products, have increased during the CUSTA era from \$17.8 million in 1989 to \$196.3 million in 2002. The major dairy food commodities exported to Canada in 2002 were cheese, valued at \$27.2 million, and whey, valued at \$24.3 million. Both sectors have increased during the last decade.

Dairy imports also have increased since 1989. In 2002, imports of dairy products were over \$1.5 billion, slightly lower than in 2001 (Table 2). The most important sources for U.S. dairy imports were New Zealand, Italy, France and Ireland, although Ireland's imports have been declining. The top-four trading partners accounted for over half of the imports. New Zealand, alone, accounts for almost one-fourth of the imports. Only 10 percent of total dairy imports came from the NAFTA partners. Imports from New Zealand increased from \$159.2 million in 1989 to \$346.3 million in 2002 and consisted mainly of casein, cheese and whey.

## Tables and figures

Table 1: U.S. Dairy Exports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mexico	206.8	62.1	121.0	162.7	245.2	183.8	124.5	109.5	172.5	182.8	177.3	184.2	250.6	202.6
Canada	17.8	35.9	44.1	54.4	60.7	60.3	71.2	97.6	102.4	119.8	151.7	182.7	188.3	196.3
Japan	33.3	34.9	46.3	71.2	64.6	71.8	99.0	107.9	115.0	110.7	109.3	105.7	101.4	96.2
Total	432.1	350.2	465.0	806.6	865.2	769.9	781.4	713.7	912.8	891.4	896.6	#####	#####	948.5

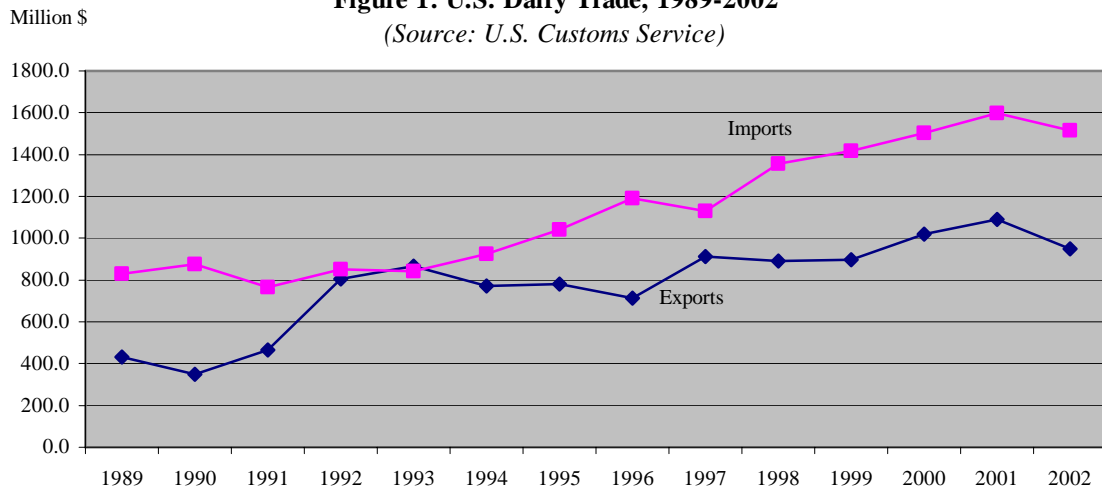
(Source: U.S. Customs Service)

Table 2: U.S. Dairy Imports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New Zealand	159.2	183.0	170.6	141.2	143.5	187.4	175.4	235.4	255.6	360.1	320.9	350.9	447.0	346.3
Italy	68.2	84.6	97.2	106.2	117.1	118.0	137.3	147.3	139.9	134.9	148.0	148.6	166.2	167.5
France	69.1	80.1	67.7	88.2	76.8	80.6	110.2	130.5	129.6	125.8	143.6	136.9	129.2	135.8
Ireland	138.9	130.0	100.3	153.3	119.8	116.4	149.0	169.0	141.3	143.6	132.5	136.9	119.8	121.4
Total	828.6	874.5	766.0	851.9	841.1	923.0	1039.8	1191.4	1130.3	1355.6	1417.0	1501.6	1599.2	1514.7

(Source: U.S. Custom Service)

**Figure 1: U.S. Dairy Trade, 1989-2002**  
(Source: U.S. Customs Service)



## **Fluid Milk**

Fluid milk consumption in the United States has changed drastically since the early 20<sup>th</sup> century (Figure 2). In 1909, the average American was consuming 26.68 gallons of whole milk per year. Consumption peaked in 1945, reaching 40.05 gallons per capita. Since then, consumption of milk, and especially whole milk, has decreased. The decline in whole milk consumption was accelerated when lower fat (2%) milk was introduced into the American diet in 1952, and even more in 1967 when 1 percent milk became a choice. By 1989, more low-fat milk was being consumed than whole milk, with Americans consuming 11.14 gallons of lower fat milk and 11.02 gallons of whole milk on a per capita basis. The trend continued until lower fat milk peaked in 1991, with 11.47 gallons being consumed per capita. From that point, consumption of both lower fat and whole fat milk has steadily declined. In 2001, the average American was consuming 9.59 gallons of lower fat and 7.41 gallons of whole milk, for a total of 17 gallons—half of what was being consumed 50 years prior.

Under California milk marketing order rules, raw milk used for fluid drinking typically receives a higher price than milk used for other purposes. Thus, the share of milk used for drinking is determined by demand conditions. For many years fluid use has been stagnant or has grown slowly with population as per capita consumption falls. Given the rapid growth in milk production, this has meant that a falling share of all milk in California goes for fluid use.

### **Tariff rates and policy changes resulting from NAFTA**

U.S. tariffs for fluid milk imports from countries with which the United States maintains normal trade relations range from 0.34 cents per liter to 77.2 cents per liter depending on U.S. quantitative limitations and fat content of the milk to be imported. For trade partners without normal trade status with the United States, tariffs are higher and range from 0.5 cents per liter to 90.8 cents per liter.

Before the Canadian-U.S. Free Trade Agreement (CUSTA), the Canadian tariff rate for fluid milk was 17.5 percent, which was reduced in equal steps over 10 years until it reached zero in 1998. However, Canada established an annual tariff-rate quota for fluid milk as part of its Uruguay Round market access commitment, which had been the subject of trade disputes in the past.

Prior to NAFTA, Mexico's tariff on fluid milk imports was 10 percent. The tariff has been phased out over 10 years.

In 1988, U.S. tariffs on fluid milk imports ranged from 0.4 cents per liter to 15 cents per liter depending on fat content (varying from less than 1 percent to more than 45 percent). A quota was in place for milk with a fat content of 1 to 6 percent. It amounted to 11.4 million liters. The tariff for shipments within the quota was 0.5 cents per liter. For imports exceeding the quota, the tariff was 1.7 percent. Those tariffs have been phased out for Canadian imports.

Imports from Mexico before NAFTA were subject to the same tariff rates that Canada had faced before CUSTA. Most tariffs were phased out immediately, but tariff rate quotas are still in place for fluid milk imports with a high fat content. The quantitative restrictions expired in 2003.

## **Exports**

Due to its proximity, Mexico is the major market for U.S. fluid milk. Exports to Mexico accounted for at least 50 percent of total exports during most years between 1989 and 2002 (Table 3). Exports to Mexico decreased from \$27.9 million in 1993 prior to NAFTA to \$15.1 million in 2001. In 2002, exports dipped to \$14.2 million. Exports peaked during the first year of NAFTA at \$34.5 million, although fluid milk exports were already showing an increasing trend prior to NAFTA. In 1989, the level was already almost as high as in 2001. According to California port data, roughly 18 percent of total U.S. fluid milk exports to Mexico came from California in 2002. That share had increased from 12 percent in 1993. Most of the imports, for logistical reasons, continue to go to the border cities of northern Mexico, and were not included in the port data.

Hong Kong and Taiwan are also important destinations for U.S. fluid milk exports. In 2002, the United States exported \$5.3 million in fluid milk to the two countries, equivalent to one-fourth of the total value of all exports.

## **Imports**

Total U.S. fluid milk imports amounted to \$10 million in 2002, down from the previous year, but up from \$4 million in 1993 (Table 4).

As of 2002, New Zealand was the largest source for U.S. fluid milk imports, supplying \$3.7 million, overtaking Canada and resuming its place as the United States' largest supplier. Canada, nevertheless, still made up about 34.6 percent of total imports. Although less than in 2001, imports from Canada amounted to almost \$3.5 million in 2002, up from \$2.9 in 1989. Imports from Canada fell dramatically in 1992, but recuperated during the second half of the 1990s. According to Canada Statistics, most fluid milk shipments went to New York in 2002 and only small amounts (\$58,158) reached California.

U.S. imports from Mexico have been largely insignificant during the NAFTA era. In 2002, roughly \$1.4 million worth of fluid milk was imported from Mexico, ranking them as the United States' third largest import source. All of it consisted of milk with a fat content of more than 6 percent.

## **Prices**

In 2001, the average inflation-adjusted U.S. milk price (1996 dollars) was \$13.78 per cwt (Figure 3). The following year, the price was down 20 percent to \$11.02 per cwt. Wisconsin prices were closer to the national average, at \$13.61 per cwt in 2001 and \$11.02 in 2002. In 2001 and 2002, the highest prices received in the continental United States (prices in Hawaii and Alaska were higher) were in Florida, Virginia and North Carolina. In general, California prices follow the national trend, although slightly lower.

The price for California fluid-grade milk has fluctuated considerably and decreased a little over during the last decade. The 2002 price (in 1996 dollars) was \$9.89 per cwt, down 22 percent from \$12.74 per cwt in 2001. The 2001 price was almost \$3 per cwt higher than in 1999. The price peaked in 1998 at \$14.60 per cwt and was lowest in 2002.

## Tables and figures

Table 3: U.S. Fluid Milk Exports, 1989-2002, in million \$

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mexico	14.6	13.4	16.7	24.1	27.9	34.5	10.3	15.7	24.0	15.3	8.5	12.3	15.1	14.2
Total	20.2	17.3	20.3	27.2	38.0	43.5	21.1	28.6	34.3	26.6	16.2	20.5	21.7	20.4

(Source: U.S. Customs Service)

Table 4: U.S. Fluid Milk Imports, 1989-2002, in million \$

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New Zealand	7.3	7.1	3.0	3.1	3.6	3.6	3.5	5.7	4.3	7.8	7.1	3.0	4.8	3.7
Canada	2.9	3.2	2.6	0.0	0.0	0.0	0.1	2.0	3.7	4.5	8.7	3.7	6.6	3.5
Total	10.4	10.7	5.8	3.5	4.0	3.9	3.8	8.3	8.4	12.9	16.8	8.8	13.7	10.0

(Source: U.S. Customs Service)

Figure 2: U.S. Per Capita Milk Consumption, 1909-2001

(Source: USDA Economic Research Service)

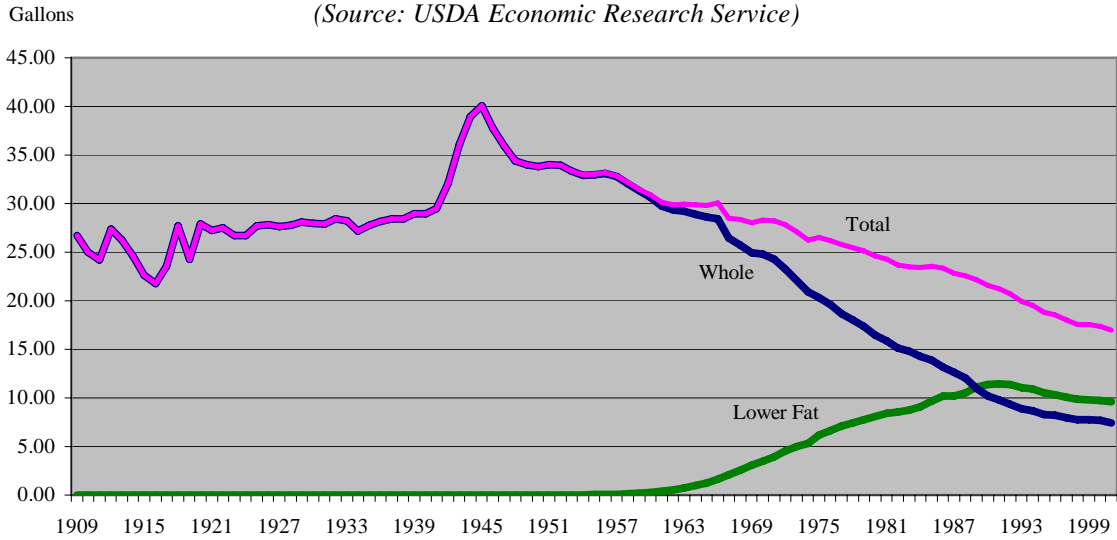
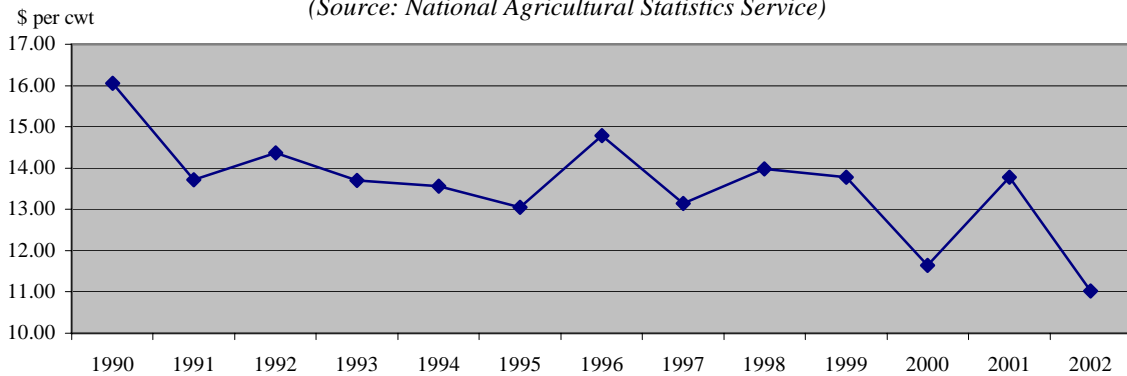


Figure 3: U.S. Fluid Milk Prices, in 1996 dollars, 1992-2002

(Source: National Agricultural Statistics Service)



## **Nonfat dry milk**

The United States is the largest nonfat dry milk (NFDM) producer in the world. In 2002, 42 plants produced 1.57 billion pounds of NFDM, up 11 percent from the previous year. In California, 11 plants produced 759 million pounds (Figure 4). Compared to 1992, when 359 million pounds were produced, production of NFDM in California has risen 111.4 percent. California's share of U.S. production increased from 41 percent in 1992 to 48.4 percent in 2002. Other significant producers of NFDM were Washington (192 million pounds) and Idaho (89 million pounds).

### **Tariff rates and policy changes resulting from NAFTA**

The U.S. tariff on NFDM imports is 3.3 cents per kilogram for shipments from countries with which the United States maintains normal trade relations. Nations without normal trade status with the United States face a tariff of 6.6 cents per kilogram.

Before the Canadian-U.S. Free Trade Agreement (CUSTA), Canada imposed a tariff of 7.72 cents per kilogram on all imports of NFDM. That tariff was reduced over 10 years until it fell to zero in 1998.

Mexico converted its import-licensing regime for NFDM to a transitional tariff rate quota under NAFTA, which will be in effect for 15 years. The United States was initially allowed to export 40,000 metric tons to the Mexican market duty-free. That amount is increasing 3 percent annually until the quota is eliminated at the end of the transition period. Exports in excess of the quota are charged an initial over-quota tariff of \$1,160 per metric ton. That tariff is being reduced annually and will be phased out over the 15-year transition period. In 2002, the tariff-rate quota (TRQ) was 50,670 metric tons.

The U.S. tariff for imports prior to CUSTA was 3.3 cents per kilogram. It was reduced over 10 years and fell to zero in 1998. When NAFTA went into effect, the United States established an initial TRQ of 422 metric tons for imports of NFDM from Mexico. The TRQ grew 3 percent annually over a 10-year transition period and reached 535 metric tons in 2002 before being eliminated in 2003. Imports from Mexico were less than 10 percent of total imports in 2001.

### **Exports**

U.S. exports of NFDM in 2002 were valued at \$114.5 million, down 40 percent from the previous year (Table 5). Exports in 2002 were the lowest since 1997.

The top export destination in 2002 was Mexico, which received \$62.9 million in U.S. shipments. The value of NFDM exports to Mexico was highest in 2001 when the United States shipped over \$111 million. NFDM shipments to Mexico decreased sharply in 1996 and 1997 due to the devaluation of the Mexican peso in 1995, a reduction in DEIP sales, and higher international prices.

The Philippines and Thailand were also important destinations for U.S. NFDM exports. Together, the two countries received \$23.1 million, or 14.5 percent of total exports.



## Imports

In 2002, imports of NFDM were valued at \$8.6 million, up from \$1.3 million in 1989 and 1993. The main import sources were Canada and New Zealand, together providing 70 percent of U.S. imports. Imports from Canada increased from \$0.5 million in 1989 to \$3.9 million in 2002. While imports were consistently less than \$1 million during the 1990s, imports from Canada quadrupled from \$0.8 million in 2000 to \$3.5 million in 2001.

## Tables and figures

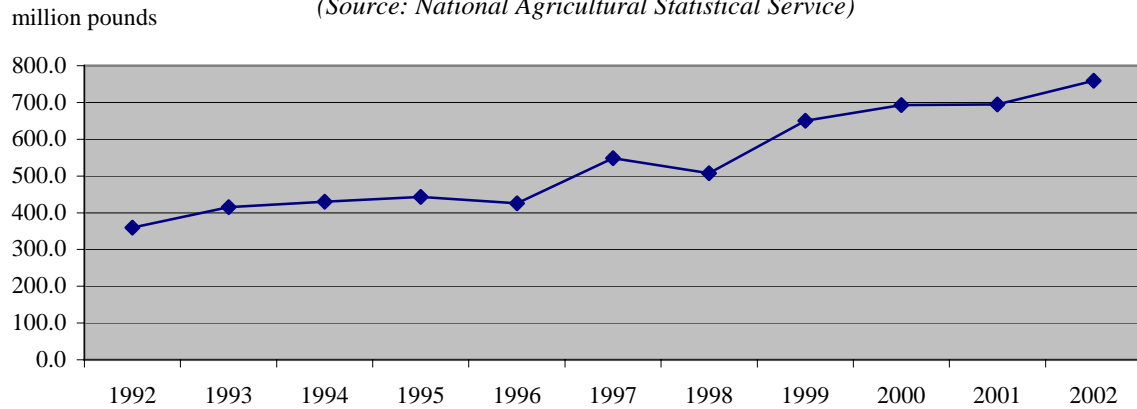
Table 5: U.S. NFDM Exports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mexico	68.8	5.1	33.5	38.1	85.3	34.3	27.7	9.3	3.0	24.6	87.7	51.8	111.0	62.9
Total	102.3	11.7	65.7	118.2	132.9	83.4	115.2	34.9	109.2	120.6	167.7	157.4	189.5	114.5

(Source: U.S. Customs Service)

Figure 4: California Nonfat Dry Milk Production, 1992-2002

(Source: National Agricultural Statistical Service)



## **Butter**

Butter consumption in the United States has been declining since the early 1900s (Figure 5). Consumption peaked at 18.7 pounds per person in 1911. Consumption declined for the following decade before increasing almost to the 1911 level in 1934. Since 1934, consumption followed another steady downward trend until it leveled off in the mid-1970s at around 4 to 5 pounds. Americans consumed an average of 4.5 pounds of butter in 2000 and in 2001.

California is the largest butter producer in the United States and accounted for 28 percent of total U.S. butter production, followed by Wisconsin with 25.2 percent. In 2002, the United States produced over 1.35 billion pounds of butter, a 10 percent increase from 2001.

California's share in the nation's butter production is up 24 percent from 1992. In 1992, 18 plants produced 328 million pounds of butter. The number of producing plants had decreased to 11 in 2002, but production was up to 379.5 million pounds (Figure 6). In Wisconsin, 11 plants produced 342.5 million pounds. Production in 2002 was up 11.2 percent in California and 5.5 percent in Wisconsin over 2001.

In the following sections, the term butter includes dairy spreads as well as fats and oils derived from milk.

### **Tariff rates and policy changes resulting from NAFTA**

The U.S. tariff on butter imports from countries with which the United States maintains normal trade relations is 12.3 cents per kilogram within the tariff rate quota and \$1.541 per kilogram in excess of the quota. The respective figures for countries without normal trade status with the United States are 30.9 cents per kilogram and \$1.813 per kilogram.

Before CUSTA, Canada placed a tariff of 26.46 cents per kilogram on butter imports. The tariff for other fats and oils derived from milk was 17.5 percent ad valorem. Both tariffs were phased out over 10 years and expired in 1998. The Mexican tariff for butter imports was 20 percent but was also phased out over 10 years.

Prior to CUSTA, U.S. tariffs on Canadian imports ranged from 12.3 cents per kilogram to 30.9 cents per kilogram for butter and 10 percent ad valorem for other fats and oils derived from milk. All tariffs were subject to a 10-year reduction as part of CUSTA and reached zero in 1998.

Imports from Mexico in 1993 faced the same U.S. tariffs that Canada had faced before CUSTA. Most tariffs on butter imports from Mexico were phased out over five years, and the remaining restrictions were phased out in 2003.

### **Exports**

Total U.S. exports of butter, dairy spreads, and other fats and oils have fallen during the past decade. From a value of \$170.1 million in 1993, exports fell to only \$5.8 million in 2002 (Table 6).

Aruba, not historically a large importer of U.S. butter, received \$1.1 million in butter exports from the United States in 2002. This represented a 222 percent increase from 2001, when exports were only \$326,783. In 1999 and 2000, the United States did not send any butter to Aruba.

Butter exports to Canada have been low during the CUSTA years. In 2002, they were at \$983,710, ranking Canada as the United States' second largest export destination. Exports to Canada came mainly from Wisconsin and New York.

Saudi Arabia ranked third in butter shipments from the United States, receiving \$702,921 in 2002, down from \$854,540 in 2001. Exports of butter to Saudi Arabia have not traditionally been large, valued at only \$144,362 in 1999 and 2000 combined.

U.S. butter exports to Mexico varied during the last decade, but have shown a decreasing trend. Exports were generally higher before 1994 and had fallen to a value of less than \$1 million by 2001. In 2002, exports to Mexico were \$602,445, leaving them as the fourth largest export destination for U.S. butter.

### Imports

U.S. butter imports in 2002 totaled \$46.4 million, up from \$3.9 million in 1989 and \$2.5 million in 1993, but they were almost half the 2001 level of \$85.1 million (Table 7). Imports of dairy spread totaling \$22.8 million comprised the largest category of butter imports, while butter accounted for \$13.5 million, and oils and fats derived from milk were \$10.1 million. Most of the butter, as well as oils and fats, came from New Zealand. However, virtually all U.S. dairy spread imports (93 percent) in 2002 came from Canada. In general, total butter imports from Canada have been insignificant during much of the 1990s but surged to \$11.7 million in 1998 and to almost \$30 million in 2001. Canadian imports were down to \$21.5 million in 2002. The majority of these imports were shipped to Wisconsin and New York. California imports of butter, dairy spreads, and oils and fats derived from milk from Canada were valued at just over \$100,000 in 2002. Imports from Mexico were insignificant at \$46,198 in 2002.

### Tables and figures

Table 6: U.S. Butter Exports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	0.0	0.1	0.0	0.0	1.2	0.3	0.7	1.0	0.6	0.3	0.2	0.7	0.9	1.0
Mexico	22.6	13.3	16.0	21.2	21.6	12.9	3.8	3.4	12.5	7.0	1.5	3.7	0.9	0.6
Total	54.0	111.2	45.4	158.2	170.1	107.7	62.6	41.5	26.0	14.2	4.5	7.4	5.3	5.8

(Source: U.S. Customs Service)

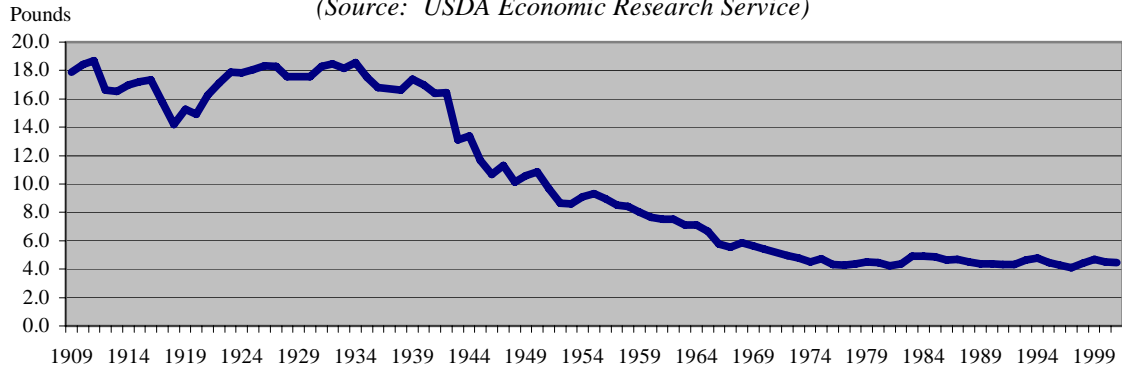
Table 7: U.S. Butter Imports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New Zealand	1.4	1.6	0.5	0.5	1.2	1.2	0.2	6.9	13.4	41.8	19.5	14.2	32.2	14.1
Canada	0.0	0.3	0.3	0.2	0.5	0.2	0.1	0.2	2.0	11.7	14.0	8.5	29.9	21.5
Total	3.9	3.8	1.7	1.6	2.5	2.1	1.4	9.1	19.5	72.5	47.7	30.0	85.1	46.4

(Source: U.S. Customs Service)

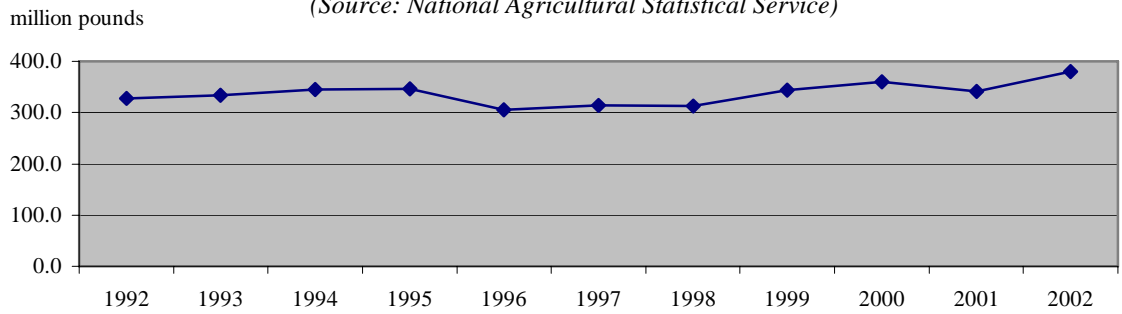
**Figure 5: U.S. Butter Consumption, per capita, 1909-2001**

*(Source: USDA Economic Research Service)*



**Figure 6: California Butter Production, 1992-2002**

*(Source: National Agricultural Statistical Service)*



## **Cheese**

U.S. consumption of cheese has increased six-fold since the early 1900s (Figure 7). In 1909, per capita consumption was 3.8 pounds. By 1950 it had doubled to 7.7 pounds. The rate of growth in consumption picked up in the late 1960s and by 1983 was more than 20 pounds. In 2001, consumption peaked at 30 pounds per capita.

U.S. cheese production in 2002 was 8.6 billion pounds. Wisconsin was the leading state, producing 2.24 billion pounds, or over 26 percent of total production. California ranked second, with 1.72 billion pounds (20 percent). In 2002, 403 plants produced cheese in the United States—116 were in Wisconsin and 63 were in California. California production has increased sharply since 1993 when only 48 plants produced 848 million pounds of cheese and California accounted for only 13 percent of total cheese production in the United States (Figure 8). Wisconsin has lost share of U.S. production, down from 31 percent in 1993 to 26.1 percent in 2002.

### **Tariff rates and policy changes resulting from NAFTA**

U.S. tariffs on cheese imports from countries with which the United States maintains normal trade relations vary from 2.7 percent to 25 percent ad valorem, depending on the type of cheese. Nations without normal trade status with the United States face tariffs of 35 percent.

A number of quantitative restrictions are in place for cheese imports, and higher tariffs might apply under those restrictions.

Before CUSTA, Canada imposed a tariff of either 6.61 cents per kilogram or 7.71 cents per kilogram, depending on the type of cheese. Most Canadian cheeses were exempt from the tariff elimination provision under CUSTA. Canada protects its cheese production with tariff rate quotas and prohibitively high over-quota tariffs of 245.5 percent ad valorem.

In 1993, before NAFTA, Mexico had relatively high tariffs for cheese imports from the United States. Under NAFTA in 1994, Mexico converted its licensing regime for cheese imports to a tariff-only treatment. Imports from the United States were assessed an initial 40 percent on fresh cheese and 20 percent on other cheeses. All tariffs were reduced to zero in equal installments over a 10-year period.

Prior to CUSTA, the United States imposed myriad tariffs on cheese imports. Tariffs ranged from 6 percent to 25 percent, depending on the type of cheese. For Canada, all tariffs were reduced in equal increments over 10 years and were eliminated in 1998.

In 1993, Mexico faced the same U.S. tariffs on cheese as Canada had faced before CUSTA. Under NAFTA, all U.S. import restrictions on Mexican cheese were replaced with a tariff-rate quota. The initial amount of this quota for U.S. imports from Mexico was 5,550 metric tons. The quota grew 3 percent annually until 2002, when it amounted to 7,030 metric tons. Shipments within the quota entered the United States duty-free, but above-quota shipments initially faced a tariff of 69.5 percent ad valorem or a specific duty ranging from \$1,200 to \$2,180 per ton, depending on the type of cheese. The over-quota tariffs were phased out over 10 years and were eliminated in 2003.

## Exports

U.S. cheese exports have increased dramatically, from \$24.8 million in 1989 to \$160.4 million in 2002 (Table 8). The most important export destination is Mexico, which received 27 percent of U.S. cheese exports in 2002. Other important destinations were Japan and Canada. Japan received nearly 18 percent of cheese exports and Canada received 17 percent.

Port data collected by the U.S. Customs Service show that exports of California cheese increased from approximately \$3.9 million in 1989 to approximately \$41 million in 2001. California increased its share of U.S. cheese exports from 15 percent in 1989 to almost 26 percent in 2001.

Total U.S. exports of cheese to Canada increased more than five-fold from \$5.2 million in 1989 to \$27.2 million in 2002 (Figure 9). Exports peaked in 2000 at \$31.7 million. According to Canada Statistics, most cheese exports to Canada come from Wisconsin and northeastern U.S. states, especially New Jersey. In 2002, California ranked fifth in exports to Canada, shipping \$1.8 million worth of cheese. This level was higher than a decade ago but remains small compared to total exports.

Total U.S. cheese exports to Mexico increased from \$20.1 million in 1993 to \$41.8 million in 2002. The 2002 level was down 6 percent from 2001, following a 54 percent increase from 2000 to 2001. Nearly \$15 million of total U.S. cheese exports to Mexico were shipped through California ports, up from \$9.1 million in 1993.

## Imports

The United States imports more cheese than it exports. Total cheese imports in 2002 were \$787.4 million, up from \$745.9 in 2001 and the highest level since at least 1989 (Table 9). Italy was the main source of imported cheese in 2002, providing 20.1 percent of all imports. New Zealand and France were also important sources of imports, each shipping almost \$90 million of cheese to the United States in 2002. Three percent of U.S. cheese imports came from Canada in 2002. Cheese imports from Canada increased from \$7.8 million in 1989 to \$24.5 million in 2002. Imports peaked at almost \$28 million in 1999. According to Canada Statistics, California received less than 1 percent of Canadian cheese at a value of \$1 million.

Cheese imports from Mexico totaling \$1.5 million in 2002 were insignificant compared to total U.S. cheese imports. The primary type of cheese imported from Mexico was chongos cheese.

## Tables and figures

Table 8: U.S. Cheese Exports, in million \$, 1989-2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Japan	6.5	6.9	6.6	7.6	8.9	10.7	14.2	18.7	20.0	22.3	32.1	20.2	24.7	28.5
Canada	5.2	8.7	9.2	10.3	9.6	9.0	14.0	15.9	18.1	18.1	22.8	31.7	23.8	27.2
Mexico	1.4	4.5	8.0	15.4	20.1	26.5	13.1	13.3	15.0	17.3	15.2	29.0	44.6	41.8
Total	24.8	38.7	36.4	49.4	56.2	71.8	89.4	104.8	123.3	117.0	130.1	138.4	162.0	160.4

(Source: U.S. Customs Service)

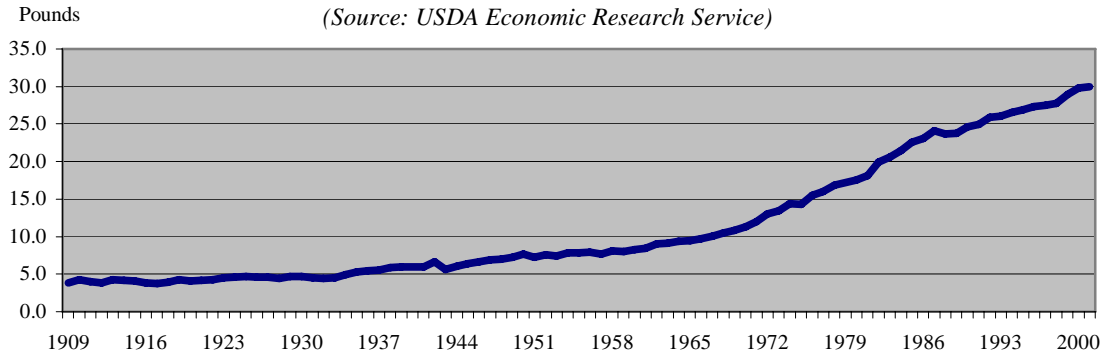
**Table 9: U.S. Cheese Imports (total and from Canada), in million \$, 1989-2002**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Canada	7.8	7.8	7.0	6.9	8.9	8.2	15.4	17.1	17.9	25.3	27.9	20.6	22.3	24.5
Total	381.0	439.3	419.6	433.8	464.3	490.8	549.2	584.3	548.4	634.9	704.9	685.6	745.9	787.4

(Source: U.S. Customs Service)

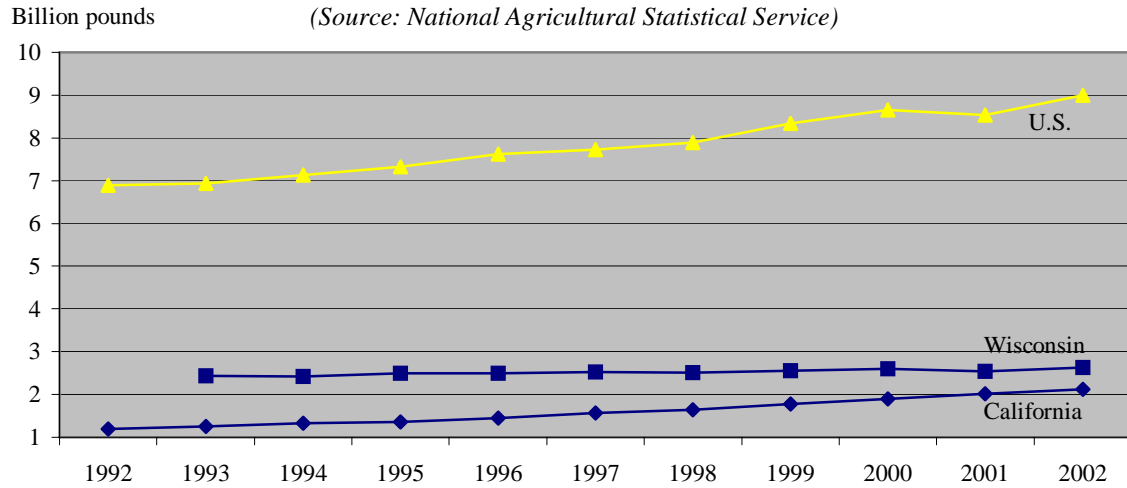
**Figure 7: U.S. Cheese Consumption, per capita, 1909-2001**

(Source: USDA Economic Research Service)

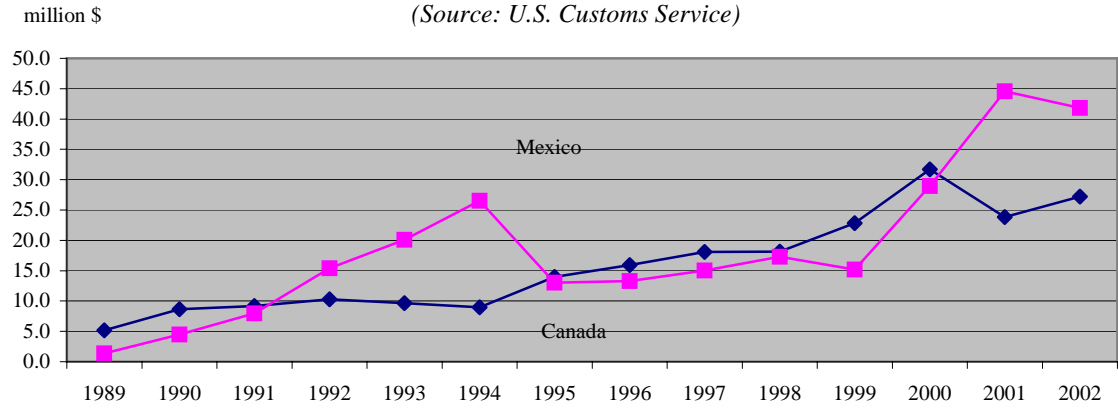


**Figure 8: U.S. Cheese Production, 1992-2002**

(Source: National Agricultural Statistical Service)



**Figure 9: U.S. Cheese Exports to NAFTA Partners, 1989-2002**  
(Source: U.S. Customs Service)





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