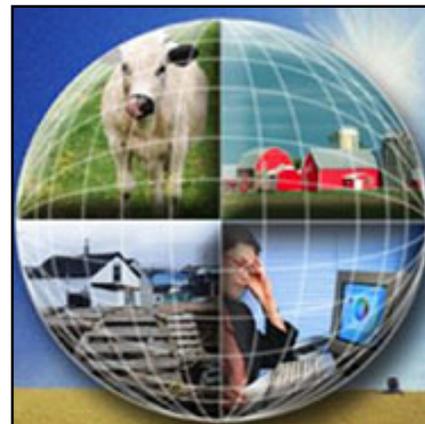


VISTA on the Agri-food Industry and the Farm Community

Changes in Canadians' preferences for milk and dairy products

by Michelle St. Pierre

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- not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- ^P preliminary
- ^r revised
- X suppressed to meet the confidentiality requirements of the *Statistics Act*
- ^E use with caution
- F too unreliable to be published
- * significantly different from reference category ($p < 0.05$)

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Introduction

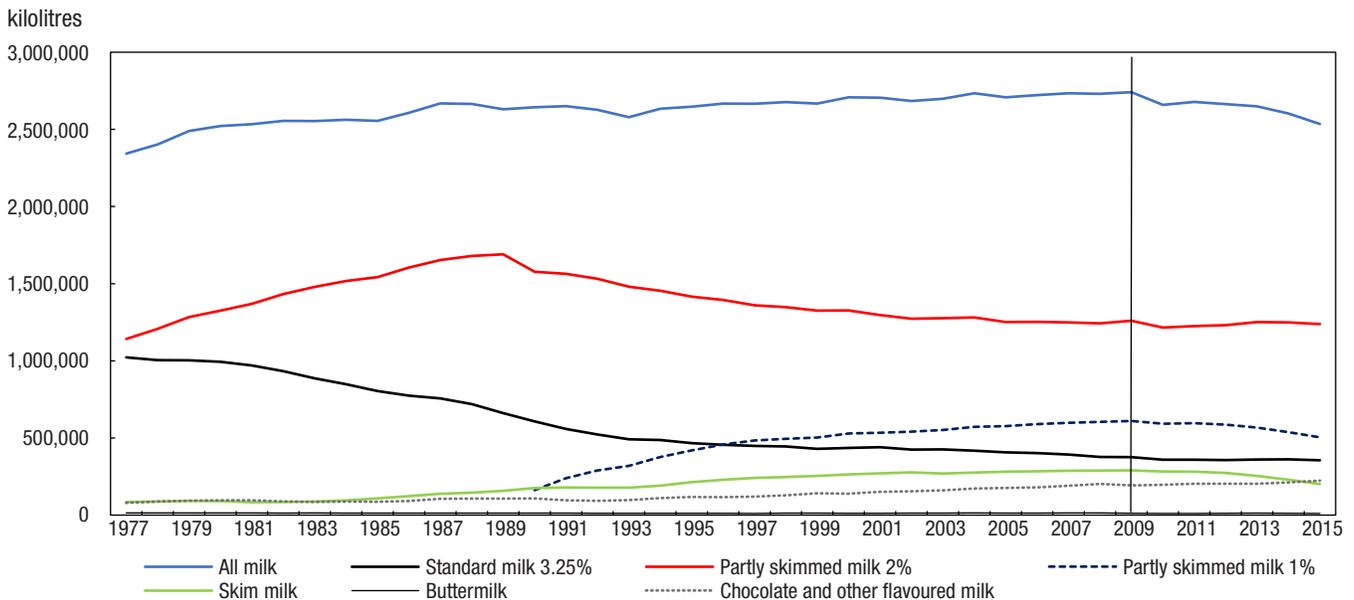
The dairy industry in Canada started in the 1500s when settlers brought dairy cattle over from Europe. It evolved in the late 1800s when Louis Pasteur invented pasteurization, the process of heating milk to kill its bacteria. This innovation made milk consumption safer. The Canadian dairy industry has since grown into a \$6 billion industry, as can be seen from 2015 farm cash receipts. It is the third-largest agricultural industry in Canada and the largest in Quebec.¹ Dairy milk is processed into fresh milk (of different fat content levels) and many different dairy products, including ice cream, yogurt and cheese. This article will show how commercial sales of fluid milk and the preferences of milk and dairy products have changed over the last few decades.

Food availability refers to the food statistics designed to provide annual measures of selected food products availability for consumption on a per capita basis. These statistics are derived using a supply and disposition framework (beginning and ending inventory, production, imports, exports, processing, losses) and population data.²

The decline of commercial milk sales since 2009

As Canada's population increases, one would also expect the commercial sales of milk to increase. However, with an aging and more ethnically diverse population, who are less likely to drink milk, milk sales have not followed the total population increase. Chart 1 shows the total commercial sales of all fat levels of milk from 1977 to 2015.

Chart 1
Commercial sales of milk, Canada, 1977 to 2015



Note: "Canada" excludes Newfoundland and Labrador for all products.
Source: Statistics Canada, Commercial sales of milk and cream, CANSIM table 003-0012.

1. Source: Statistics Canada, Farm cash receipts, CANSIM table 002-0001.
2. For more information, see: Statistics Canada. "Food Availability (per person)." <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3475> (Access March 20,2017)

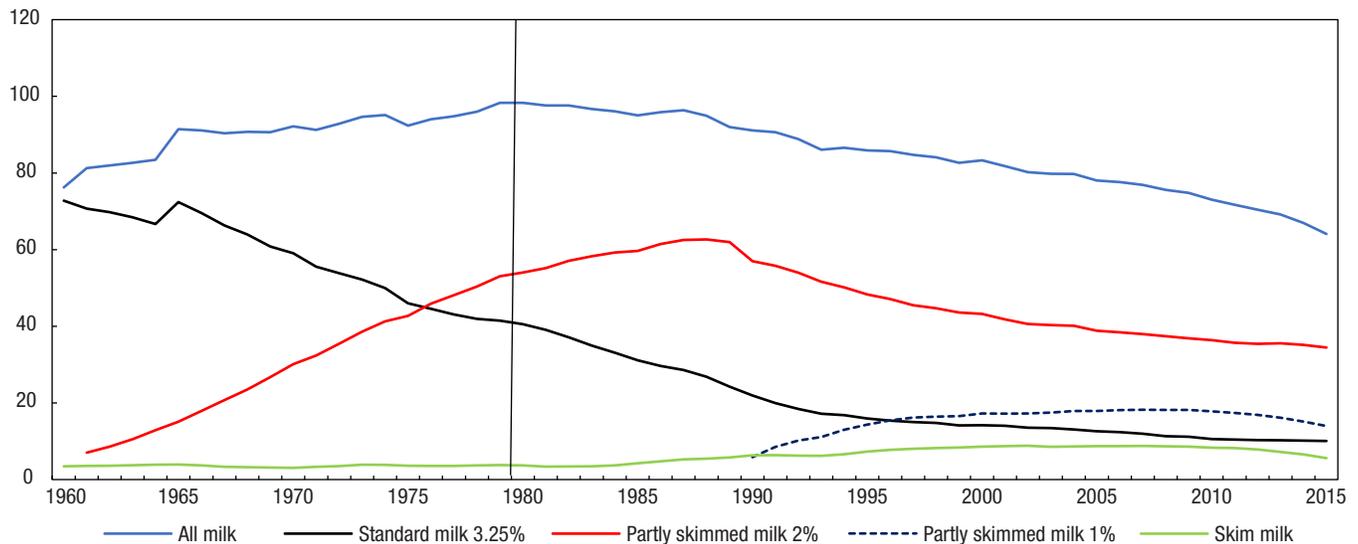
The sales of standard milk (3.25% fat) declined from 1977 to 1995. Consequently, the rate of decline slowed down until levelling off at around 355,300 kilolitres in 2015. Sales of partly skimmed milk (2% fat) increased from 1977 until 1989, then decreased until levelling off at around 1,250,000 kilolitres from 2009 onward. The sales of partly skimmed milk (1% fat) grew from 1990 (the first year data were collected) to 2009, after which they steadily decreased to 503,000 kilolitres in 2015. Skim milk (0% fat) increased progressively from 1977 to peak at around 290,000 kilolitres in 2009. Since then, skim milk has steadily decreased to around 201,000 kilolitres in 2015. Since 2007, availability for consumption of these milk products has gradually declined to levels below the level in 1981. The total commercial sales of all fat levels of milk peaked in 2009 at 2,741,000 kilolitres, then decreased to 2,538,000 kilolitres in 2015. In general, these trends in milk sales reflected the consumers demand for lower fat milk for health reasons.

The declining of milk products available for consumption

Per capita milk of all types available for consumption³ steadily increased from 1960 to peak at 98 litres in 1979 and 1980. Since then, it has gradually decreased to 64 litres per person per year in 2015. Year-over-year declines were more pronounced from 2009 to 2015.

Chart 2
Per capita milk available for consumption, Canada, 1960 to 2015

litres per person per year



Note: Does not adjust for losses (e.g. waste or spoilage) in stores, households, private institutions or restaurants, or losses during preparation.

Source: Statistics Canada, Food available in Canada, annual, CANSIM table 002-0011.

Chart 2 shows changing consumer preferences from higher-fat to lower-fat milk. This trend is most noticeable between standard 3.25% milk and partly skimmed 2% milk. Per capita, partly skimmed 2% milk became Canadian consumers' preferred milk product in 1976, surpassing standard milk available for consumption. Partly skimmed 2% milk peaked at 62.7 litres per person per year in 1988. Partly skimmed 2% milk available for consumption declined since 1989 to reach 34.4 litres per person in 2015.

Standard 3.25% milk experienced a sharp decline from 1960 to the late 1980s, and was replaced by partially skimmed 2% milk. Since the 1990s, standard 3.25% milk available for consumption has levelled off. In 1960, Canadians had standard 3.25% milk available for consumption at an average of 72.8 litres per person. Fifty-five years later, this average was down to 10.1 litres per person per year.

3. This does not adjust for losses (e.g., waste or spoilage) in stores, households, private institutions or restaurants, or losses during preparation.

Partly skimmed 1% milk available for consumption increased sharply in the 1990s to reach 17.3 litres per person in 2000. From 2000 to 2009, partly skimmed 1% milk levelled off at between 17 and 18 litres per person per year. Since 2009, partly skimmed 1% milk available for consumption has decreased 23%, reaching 14 litres per person per year in 2015.

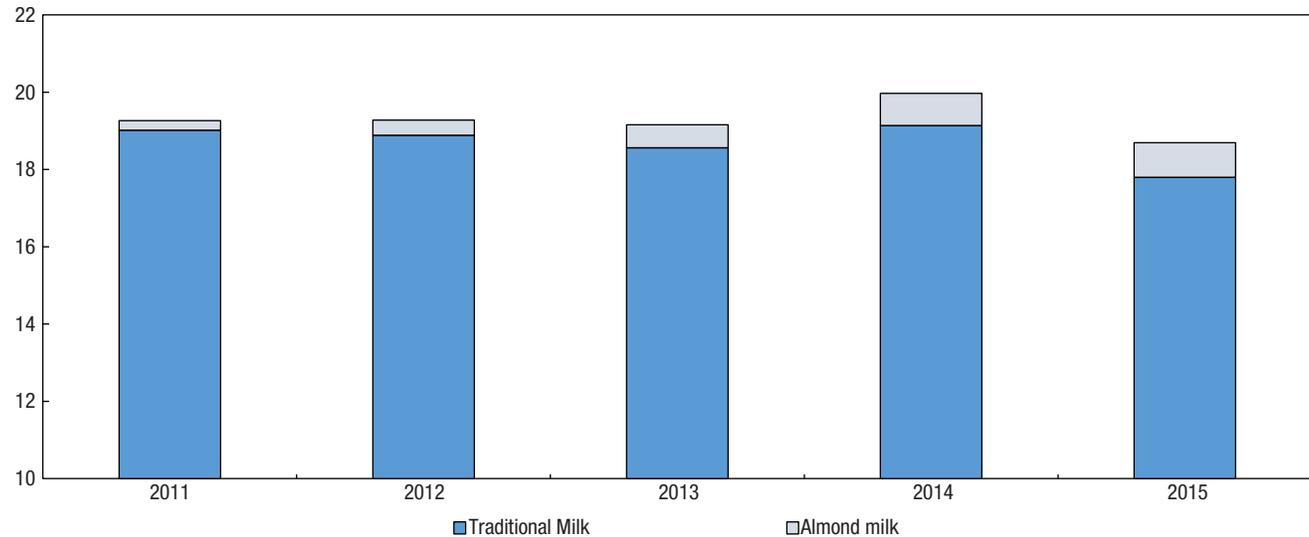
Skim milk available for consumption remained stable between 3 and 4 litres per person per year from 1960 to the mid-1980s. It then steadily increased to peak at 8.8 litres per person in 2002. Skim milk available for consumption has since declined to 5.6 litres per person per year (in 2015), a 37% drop. The substitution between higher fat to lower fat milk might be explained by consumers demand for healthier products. Partly skimmed 1% milk and skim milk demand never took off like partially skimmed 2% milk did during 1960 to 1990. Skim and 1% partly skimmed milk might not have struck the palate of Canadian consumers as 2% milk did.

The overall decline of all types of milk since 2009 may be the result of more dairy milk substitutes available to consumers, such as soy milk and almond milk. Some people are also choosing frozen desserts with alternative bases, such as coconut oil, instead of ice cream. This rise in dairy alternatives may also reflect demand from people who are lactose intolerant or who have specific dietary preferences. While Canadian data are available only for traditional milk and not milk substitutes, there is data on both traditional milk and almond milk growth in the United States.

Chart 3, based on the Nielsen Company and Mintel data, shows sales of traditional and almond milk in the United States from 2011 to 2015. From 2011 to 2012, almond milk sales grew 59.8%, while traditional milk sales fell 0.7%. This trend has continued: almond milk sales in 2015 were 7.5% higher than in 2014, which, over five years, led to a total increase in sales of over 250% and over \$894 million in total sales. Traditional milk sales in the United States saw a slight increase of 3.1% from 2013 to 2014, but, by 2015, sales had declined another 7%.

Chart 3
Sales of traditional milk and almond milk, United-States, 2011 to 2015

billions of dollars



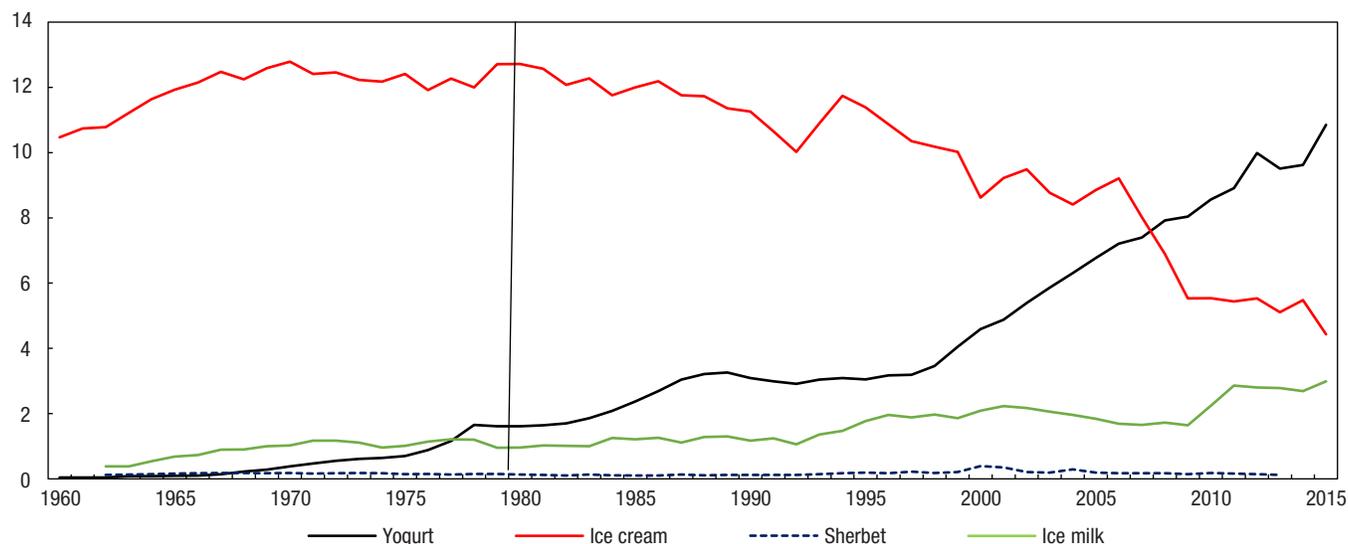
Source: Data derived using The Nielsen Company and Mintel data.

Dairy products available for consumption

Ice cream available for consumption dropped over 65% from 12.7 litres per person in 1979 to 4.4 litres per person in 2015 (Chart 4).

Chart 4
Per capita yogurt and ice cream available for consumption, Canada, 1960 to 2015

litres per person per year



Note: Does not adjust for losses (e.g. waste or spoilage) in stores, households, private institutions or restaurants, or losses during preparation.

Source: Statistics Canada, Food available in Canada, annual, CANSIM table 002-0011.

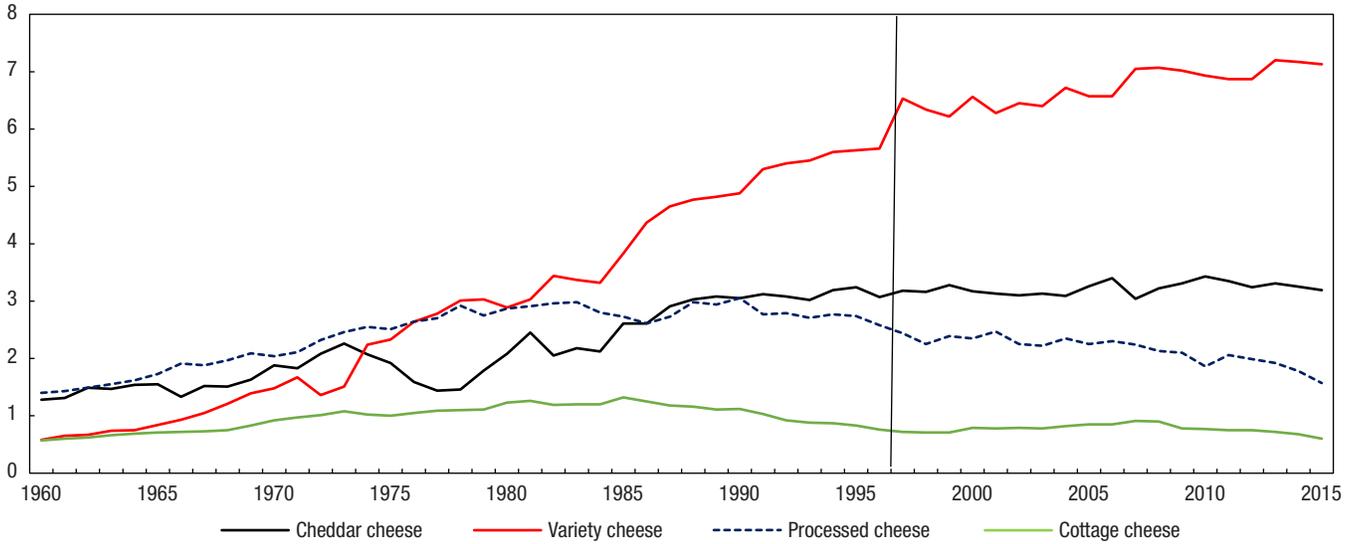
During the same period, yogurt available for consumption increased from 1.6 litres per person to 10.9 litres per person. The decrease in ice cream may be a result of a more health-conscious population or of the replacement of ice cream with “frozen desserts” many made from frozen yogurt. Some of the decrease in ice cream may also reflect the increase in ice milk available for consumption. However, Canadians had definitely switched to healthier lower fat products.

Cheddar cheese availability has increased 149% from 1.3 kilograms of cheese per person in 1960 to 3.2 kilograms in 2015 (Chart 5). Canadian consumers have also expanded their palate for more refined cheeses. Variety cheeses have increased steadily since 1960 from 0.6 kilograms per person to level off from 6 to 7.1 kilograms per person between 1997 and 2015.

Processed cheese has declined from a high of 3.1 kilograms per person in 1990 to a low of 1.57 kilograms per person in 2015. This may also reflect a more health-conscious population or an aversion to processed foods. Cottage cheese available for consumption has remained relatively low, ranging from 0.6 to 1.3 kilograms per person per year during the 1960-to-2015 period.

Chart 5
Per capita cheese available for consumption, Canada, 1960 to 2015

kilograms per person per year



Note: Does not adjust for losses (e.g. waste or spoilage) in stores, households, private institutions or restaurants, or losses during preparation.
Source: Statistics Canada, Food available in Canada, annual, CANSIM table 002-0011.

Conclusion

The last 35 years have seen lower-fat milks and dairy products substituted for higher-fat milks and dairy products, which may indicate that consumers are choosing perceived healthier options. Total commercial sales of fluid milk rose until 2009, after which they decreased. Alternatively, milk substitutes have risen consistently over the past five years. This is echoed by the decrease in processed cheese available. In general, Canadians' dairy choices are trending away from traditional milk and processed or high-fat products towards lower fat dairy sources and dairy alternatives.

References

- Barratt, R. F. (2006, February 7). *Dairy Industry*. Retrieved August 16, 2016, from the Canadian Encyclopedia: <http://www.thecanadianencyclopedia.ca/en/article/dairy-industry/>.
- Canadian Dairy Commission. (2016, May 30). *Harmonized Milk Classification System*. Retrieved August 15, 2016, from Canadian Dairy Commission: <http://www.cdc-ccl.gc.ca/CDC/index-eng.php?id=3811>.
- Canadian Dairy Commission. (2016, May 30). *Supply Management*. Retrieved July 11, 2016, from Canadian Dairy Commission: <http://www.cdc-ccl.gc.ca/CDC/index-eng.php?id=3806>.
- Dairy Goodness. (2016, March 11). *The History of Milk*. Retrieved August 15, 2016, from Dairy Goodness: <https://www.dairygoodness.ca/milk/the-history-of-milk>.
- Elbon, S., Johnson, M., & Fischer, J. (1998). *Milk consumption in older Americans*. Retrieved from American Journal of Public Health: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1508311/>
- Hall Findley, M. (2012, June). Supply Management: Problems, Politics - and Possibilities. (T. Giannuzzi, Ed.) *The School of Public Policy Research Papers*, 5(19), 4-7.
- Mintel. (2016, April 20). *US sales of dairy milk turn sour as non-dairy milk sales grow 9% in 2015*. Retrieved January 23, 2017, from Mintel.
- Nielsen Company. (2016, March 31). *Americans are Nuts for Almond Milk*. Retrieved August 25, 2016, from Nielsen: <http://www.nielsen.com/us/en/insights/news/2016/americans-are-nuts-for-almond-milk.html>.
- Parmalat. (2015). *How Milk is Made*. Retrieved August 3, 2016, from Parmalat: <http://www.parmalat.com.au/info-center/the-truth-about-milk/>.
- ProCon.org. (2011, April 4). *How Milk Gets from the Cow to the Store*. Retrieved August 3, 2016, from ProCon.org: <http://milk.procon.org/view.resource.php?resourceID=000658&&print=true>.
- Statistics Canada. (2012, December 7). *Table 004-0004 - Census of Agriculture, selected livestock and poultry data, Canada and provinces, every 5 years (number)*. Retrieved August 10, 2016, from CANSIM (database).
- Statistics Canada. (2016, April 5). *Table 203-0028 - Survey of household spending (SHS), detailed food expenditures, Canada, regions and provinces, annual (dollars)*. Retrieved January 19, 2016, from CANSIM (database).
- Statistics Canada. (2016, May 24). *Table 002-0001 - Farm cash receipts, annual (dollars)*. Retrieved July 14, 2016, from CANSIM (database).
- Statistics Canada. (2016, June 24). *Table 003-0012 - Commercial sales of milk and cream, monthly (kilolitres)*. Retrieved July 7, 2016, from CANSIM (database).
- Statistics Canada. (n.d.). *Table 002-0011 - Food available in Canada, annual (kilograms per person, per year unless otherwise noted)*. Retrieved July 19, 2016, from CANSIM (database).

From farm to table

Ideally, a female adult cow produces milk for 10 months following the birth of her calf. She is then dry for two months to prepare for the birth of her next calf. Some of the milk produced is used to feed the calf, while a majority is placed in a refrigerated tank for up to 48 hours. Every day or two, the milk is collected by a tanker driver who checks the quality of the milk, grades it and brings it to a processing plant. A sample from the milk tanker is tested for antibiotics and temperature and a sample from the farm vat is tested for milkfat, protein, bulk milk cell count and bacteria count. The whole milk then undergoes pasteurization, homogenization, separation and further processing. Pasteurization is the process of heating milk to kill bacteria. Homogenization disperses the fat in the milk so it does not float to the top of the container. Separation is the spinning of the milk to remove the cream, which is then remixed to bring the milk to the desired level of milkfat. Other processes include culturing the milk for other products, microfiltration and ultra-high temperature treatment, which increases storage life. The milk is then packaged and delivered to stores to be sold.

Supply management

In 1966 the Canadian Dairy Commission (CDC) was created under recommendation from the Canadian Dairy Advisory Committee. This led to the creation of the National Milk Marketing Plan in 1970. The plan started with Ontario and Quebec and included all provinces by 1974, except Newfoundland, which joined in 2001. Supply management has three main functions: price setting, protection from foreign competition and control of supply. The CDC sets prices based on demand, market conditions and cost. Milk pricing also depends on final use, with a classification based on perishability. The most perishable products, such as fluid milk, sell for the highest prices. Prices then decrease as shelf life increases, from yogurt, to cheese, to butter, and finally to powders, concentrated products, and dairy products used for further processing. Foreign competition is limited by high over-quota tariffs on dairy products. Control of supply is enforced by allowing farmers to produce only their allocated quota of milk. Quotas were originally allocated based on supply in 1971 and are transferable between producers. The Canadian Milk Supply Management Committee oversees the national production level and the supply of raw milk for fluid purposes to the provinces.