

Agricultural Trade with China: Dairy Import Giant

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This EBOT is part of a series by the Agriculture and Fisheries Division in the Office of Industries re-examining agricultural trade with China since the period examined in the March 2011 USITC report “China’s Agricultural Trade: Competitive Conditions and Effects on U.S. Exports” (publication no. 4219). The largest global dairy products importer since 2010, China’s imports continue growing, and in 2018, Chinese and Hong Kong dairy imports of \$12.6 billion accounted for about a quarter of global dairy product imports (21.7 percent and 4.0 percent, respectively). This compares to the United States and Russia, ranked second and third, with imports and shares of \$2.6 billion (5.2 percent) and \$2.4 billion (4.8 percent), respectively. Import supplier shares have also shifted, with the share of China’s imports sourced from the United States peaking at 10.3 percent (\$391.9 million) in 2011 and declining to 5.2 percent (\$554.8 million) in 2018.

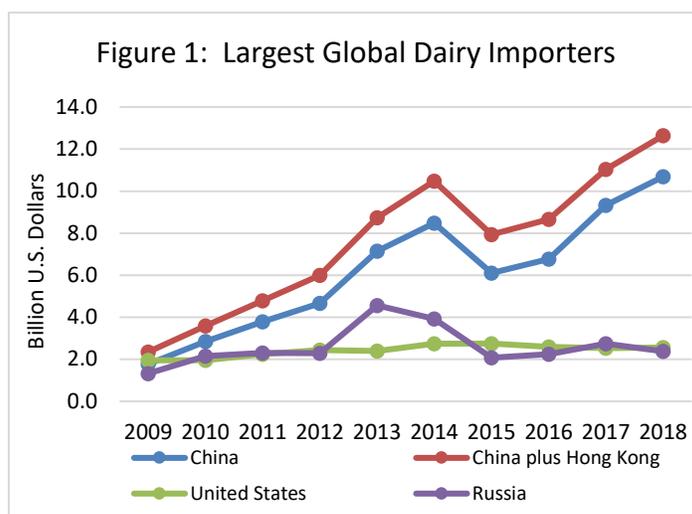
Chinese Dairy Demand Drivers

Factors driving China’s demand for dairy products include income growth, shifting cultural patterns, new preferences for dairy products, and expanded market channels. China’s per capita GDP grew at a compound annual growth rate (CAGR) of 7.4 percent from 2009 through 2017. China’s breastfeeding rate for infants under 6 months decreased and is among the lowest in the world; falling from 50.8 percent in 2003 to 20.8 percent in 2013, stimulating increased demand for infant milk-based formula. Per capita dairy consumption increased by 18.0 percent in urban households and by 94.4 percent in rural households, albeit from a lower base, from 2010 to 2017. The number of corporate food and beverage retailers increased from 1,858 to 9,319 and the number of corporate supermarkets increased from 3,766 to 5,335 between 2009 and 2017, increasing the availability of dairy products to Chinese consumers.

Growth and Changing Composition of China’s Dairy Imports

China’s dairy industry structure was based on whole milk powder (WMP). Fresh milk was produced away from population centers and infrastructure did not facilitate shipment of fluid milk. Therefore, milk was dried and shipped as WMP, then reconstituted and processed into milk beverages, infant formula, and other dairy products near consumers. As dairy demand outpaced domestic milk production, China imported WMP to make up the difference. New Zealand is the world’s leading WMP exporter, while the United States is not a major WMP supplier because of more valuable domestic uses for milkfat (ice cream, butter).

The total value of China’s dairy imports grew from nearly \$1.8 billion in 2009 to nearly \$8.5 billion in 2014, a CAGR of almost 36.8 percent (Figure 1).¹ As a result, China’s share of global dairy import value increased from 6.6 to 16.1 percent in 2014. Then Chinese dairy imports fell in 2015, but rebounded to the longer-term trajectory by 2016. The temporary decrease in Chinese WPM imports in 2015 was due to high Chinese inventories, high world prices, and slower Chinese economic growth. China’s rapidly increasing



¹ Includes HS subheadings 0401, 0402, 0403, 0404, 0405, 0406, 1702.11, 1702.19, 1901.10, 3501.10, 3501.90 and 3502.20. IHS Markit, Global Trade Atlas (accessed March 2019).

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import demand for WMP contributed to historically high global dairy prices in 2013 and 2014; consequently, China paid record prices for WMP, US\$4,233 and US\$4,934 per MT, respectively. Then, slowing economic growth beginning in 2014 reduced China's overall dairy demand growth.² From 2012 to 2014, China's WMP consumption grew by 298,000 MT; however, production and imports grew by a combined 445,000 MT. Consequently, China's stocks of WMP, which averaged 86,000 MT during 2009–13, ballooned to 350,000 MT in 2015. In turn, WMP imports decreased by 324,000 MT in 2015 as China reduced WMP stocks.

Changing tastes and perceptions of quality and safety have altered the composition of China's dairy imports, with greater demand growth for infant formula and milk beverages relative to milk powders (primarily WMP but also skim milk powder). Demand growth for imported infant formula has been especially strong as melamine adulteration in 2007 shifted preference towards imported product.³ Milk powders' share of total dairy import value peaked at 52.3 percent in 2014 and has been declining since then as imports of other products have grown more rapidly. Infant formula increased from 18.5 to 45.7 percent of total dairy import value during the same period. Fluid milk and cream increased from 1.0 percent to 8.5 percent of total import value from 2010 to 2018.

Imports from Competing Sources

New Zealand and the European Union (EU) are the leading suppliers of dairy products to China. New Zealand dominates the global market for WMP while the EU dominates the global market for infant formula and ultra-high-temperature pasteurized milk beverages.⁴ Changes in China's relative import demand for WMP versus infant formula and milk beverages have affected shares from these competing sources. New Zealand's share of China's dairy import value peaked at 52.9 percent in 2010 and decreased to 37.8 percent in 2018. The EU's share increased from 16.7 to 47.6 percent during the same period.

The United States is a leading global supplier of whey, lactose, and skim milk powders. These products dominated China's imports from the United States, averaging 72.8 percent of the total value of China's dairy imports from the United States during 2009–18. However, the share of these products in China's total dairy imports peaked at 31.0 percent of total value in 2012 and decreased to 12.4 percent in 2018 as Chinese imports of infant formula from the EU and WMP from New Zealand grew. Thus, the U.S. market share by value decreased from a peak of 10.3 percent in 2011 to 5.2 percent in 2018.

China's tastes, and thus import demand, are expected to continue to change. The U.S. Dairy Export Council expects China to be the world's largest cheese importer within the next 10 years. Since 2009, China's cheese imports have grown at a compound annual rate of 25 percent. The United States' share of China's import cheese market, however, peaked at 21 percent in 2012 and fell to 10.9 percent in 2018. This likely resulted from China's free trade agreements with New Zealand and Australia beginning in 2008 and 2015, respectively, that provide more favorable tariff terms to these competitors, as well as Chinese retaliatory tariffs on imports of U.S. cheeses in the second half of 2018.

Sources: O'Keefe, Mark, "[Prediction: China will Become the World's Big Cheese](#)," *The U.S. Dairy Exporter Blog*, 8/23/2018; Gov. of China, MOFCOM, "Announcement on Imposing Tariffs," 6/17/18; USDA, Foreign Agricultural Service, [PSD Online database](#) (accessed 3/18/19).

² China's real GDP growth averaged 8.8% during 2009–12 and 6.4% during 2014–17. World Bank, [WDI](#) (accessed 3/18/19).

³ In 2007, China's domestic milk supply was found to be adulterated with melamine, a chemical used in plastic production. Adulterated infant formula produced from this milk resulted in the death of six infants and sickened about 300,000 more, resulting in permanent kidney damage for many children.

⁴ Milk beverages processed under UHT pasteurization do not require refrigeration; these processes were developed in Europe.

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