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Fruit and Tree Nuts Outlook: Economic Insight

U.S. Fruit Competes For China Market Share

Fred Gale
FGALE@ers.usda.gov

Sophia Huang

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China's fruit imports have grown dramatically over the past 10 years as living standards rose and trade agreements opened the market to more suppliers. The United States was a pioneer in opening China's fruit market during the 1990s, but a recent surge of imports came mainly from tropical and Southern Hemisphere countries. The United States remains the predominant Northern-Hemisphere supplier, reflecting quality, extended seasonal availability and other competitive attributes.

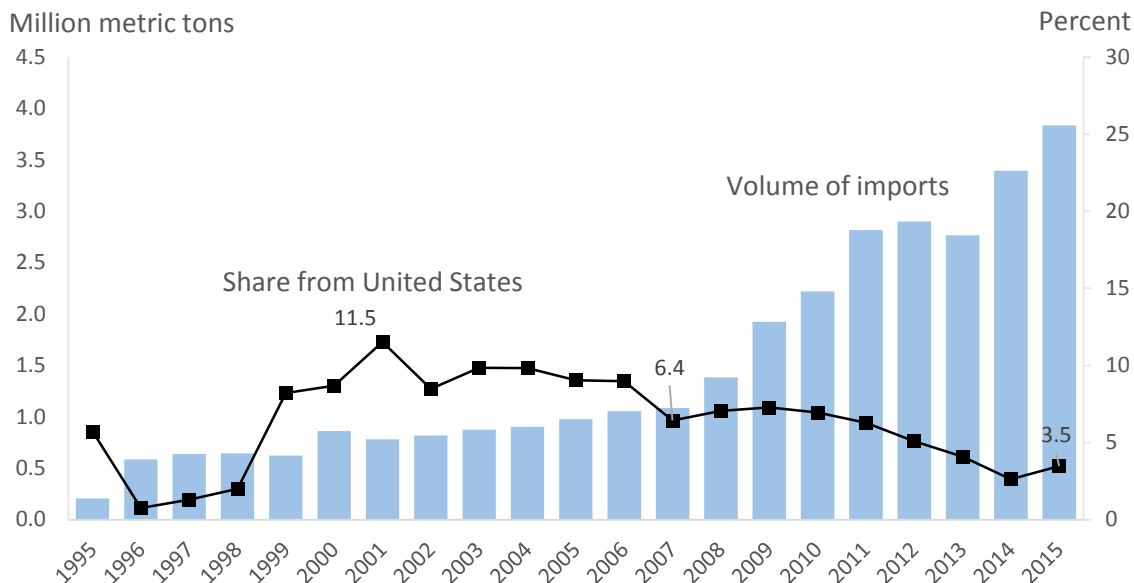
China Fruit Imports Rising

China's fruit imports are surging as living standards rise, spurring demand for a more diverse and nutritious diet. Fruit is a discretionary item consumed as a dessert, given as gifts, and distributed at meetings and banquets. With greater disposable income, demand for fruit has grown rapidly. Imports consist primarily of fresh fruit.¹

Bananas were China's predominant fruit import until the United States opened the market to more types of fruit in the early 1990s. It took a decade for the volume of China's fruit imports to double from 585,000 metric tons to over 1 million metric tons (mmt) during 1996-2006 (fig. 1). In the most recent 8 years, the import volume grew more than threefold to 3.8 mmt in 2015. The United States is a major supplier to China, but U.S. fruit faces increasing competition from both domestic Chinese fruit and imports from other countries. The U.S. share of China's fruit imports rose as high as 11.5 percent in 2001, but fell to just 3.5 percent in 2015.

¹ According to customs statistics, China's 2015 fresh fruit imports were valued at over \$5 billion, while the combined value of frozen, dried, preserved fruits, jams, and juices was \$595 million.

Figure 1. China fresh fruit imports, 1995-2015



Note: "Fresh fruit" includes Harmonized System codes 0803-0810.

Source: USDA, Economic Research Service calculations using data from Global Trade Information Services, Global Trade Atlas.

Quality and Timing Are Keys

U.S. fruit competes head-to-head against Chinese products, since fresh fruit is harvested at similar times in both countries. For example, U.S. grapes are imported during September-December, but domestic Chinese supplies are abundant during that season. The seasonal factor means that the competitiveness of U.S. exports depends on quality attributes, availability of late-maturing varieties, and use of cold storage that allows U.S. suppliers to ship during China's off-season.

Particular attributes help keep U.S. fruit competitive in China. Navel oranges are the top variety in the import market since they are seedless, easy to peel, and break into segments (USDA/FAS, 2007). U.S. Red Delicious apples are considered a preferred choice for gift-giving because of their shiny dark red color and unique, uniform shape. U.S. Red Globe grapes are prized for appearance, taste, size, and consistency, which allows them to remain competitive during the Chinese harvest season (USDA/FAS, 2012; 2015). However, these advantages may erode as Chinese farms succeed in growing similar varieties.

The timing of availability is especially important. Modern controlled-atmosphere storage extends the seasonal availability of U.S. apples in China year-round which boosts the U.S. share of China's apple imports (Huang, 2013). Peak sales seasons for fruit come during China's main holidays during the September moon festival and October national day, and the Lunar New Year, which comes in January or February. Gift-giving and celebrations during these holiday periods increases the demand for fruit, especially for fruit with colors or other attributes associated with holidays.

Tropical and Southern Hemisphere Suppliers Dominate

According to customs statistics, China's fresh fruit imports increased by 2.75 million metric tons during 2006-15, and were valued at nearly \$5 billion in 2015. Four types of tropical fruit—bananas, dragon fruit, durians, and longans—accounted for two-thirds of the growth in import volume. China's growth in fruit imports also included many temperate zone fruits grown widely in the United States, such as grapes, citrus, cherries, apples, plums, cranberries, blueberries, and pears. The pace of growth during 2006-15 was very rapid for all types of fruit (table 1).

China's fruit imports come primarily from tropical and Southern Hemisphere countries. Over half of China's fresh fruit imports (by value) were supplied by three Southeast Asian neighbors: Thailand, Vietnam, and Philippines (fig. 2). These countries supply bananas, dragon fruit, longans, and lychees that are popular with Chinese consumers but are not widely produced in the country. Southern Hemisphere countries can supply temperate-zone fruits during China's off-season. Important suppliers like Chile, New Zealand, Ecuador, Peru, South Africa, and Australia are in the Southern Hemisphere. The United States, which supplied 6.9 percent of the value of China's fruit imports during 2013-15, was the only major supplier from the Northern Hemisphere.

China has two to three major suppliers of each type of temperate zone fruit (table 2). During 2013-15, the United States was the leading supplier of pears (a relatively small market), but it was the second- or third-leading supplier of cherries, grapes, citrus, apples, and plums. Southern Hemisphere countries were the leading suppliers of each of these fruits.

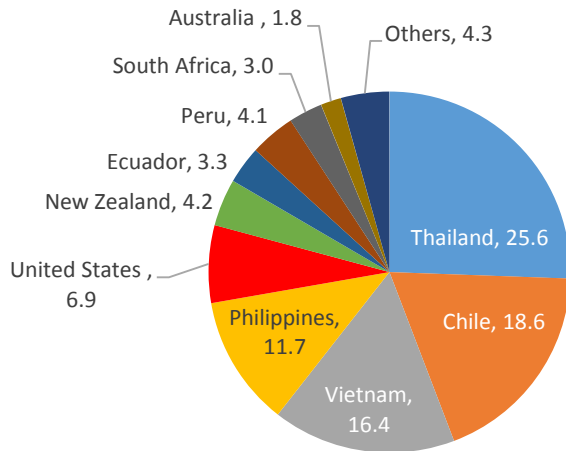
Chilean sweet cherry supplies are typically available in China at the end of the calendar year and during January-February, particularly advantageous timing since it coincides with the peak consumption season around the Chinese New Year holiday. U.S. cherries ripening at different times in different regions are able to extend their availability from May-June (California cherries) to September (cherries from northwestern States). Still, Chile has a dominant 79.7-percent share of China's cherry imports.

Table 1. China fresh fruit imports, 2006-2015

Harmonized system code	Type of fruit	Growth in		Value of imports, 2015
		import volume, 2006-2015	Import volume, 2015	
		---1,000 metric tons---		Million dollars
	All fresh fruit	2,752.4	3800.0	4,994.3
0803	Bananas	686.3	1073.8	772.8
080929	Cherries	91.3	91.5	672.5
08109080	Dragon Fruit	778.1	813.5	662.8
0806	Grapes	193.6	250.7	637.3
081060	Durians	213.6	298.8	567.9
08109030	Longan	185.6	354.1	341.9
0805	Citrus	136.0	214.9	266.9
081050	Kiwi	79.7	90.2	266.6
080450	Mangoes	89.1	112.9	260.2
080810	Apples	56.5	87.6	146.7
080940	Plums	32.4	34.8	105.2
080430	Pineapples	80.4	84.4	96.2
081040	Cranberries, Blueberries	6.0	6.5	68.1
080440	Avocados	16.0	16.0	45.1
0807	Melons	52.8	201.3	38.8
08109010	Lychee	44.9	50.5	24.8
080830	Pears	7.9	7.9	12.9
080420	Figs	1.8	2.5	3.7
080410	Dates	0.5	8.0	3.2
	Other			0.6

Source: ERS analysis of China customs statistics accessed through Global Trade Information Services, Global Trade Analysis System.

Figure 2. China fruit imports, by source country
share of 2013-15 average value (percent)



Source: USDA, Economic Research Service calculations using data from China National Bureau of Statistics, Rural Statistical Yearbook.

Table 2. Shares of China fruit imports, 2013-15 average

Cherries		Grapes		Citrus		Apples		Plums		Pears	
Exporting country	Share of China's imports	Exporting country	Share of China's imports	Exporting country	Share of China's imports	Exporting country	Share of China's imports	Exporting country	Share of China's imports	Exporting country	Share of China's imports
	Percent		Percent		Percent		Percent		Percent		Percent
Chile	79.7	Chile	38.0	South Africa	43.9	Chile	37.0	Chile	78.3	United States	65.9
United States	15.4	Peru	27.9	United States	23.6	New Zealand	32.7	United States	21.6	Belgium	18.8
Canada	2.8	United States	20.0	Australia	18.6	United States	21.8	Others	0.1	Netherlands	5.2
Others	2.1	South Africa	5.0	Taiwan	4.2	France	4.5			New Zealand	5.1
		Australia	4.9	Thailand	4.0	Japan	3.2			Others	5.0
		Uzbekistan	1.9	Egypt	3.5	Others	0.8				
		Others	2.4	Others	2.2						

Source: USDA, Economic Research Service analysis of China customs statistics accessed through Global Trade Information Services, Global Trade Analysis System.

China Also a Major Producer of Fruit

While demand for fruit in China has grown rapidly, the country is also the world's largest producer of fruit and output has also grown rapidly. China's National Bureau of Statistics estimated that fruit production nearly doubled between 2004 and 2014 (the latest numbers available), from 84 mmt to 166 mmt. The 2014 output dwarfed the 3.4 mmt of fruit imported that year. China produces many of the same types of fruit as U.S. producers, including apples (40.9 mmt produced in 2014), citrus (34.9 mmt), pears (18 mmt), and grapes (12.5 mmt). China has no data on cherry output, but USDA estimates China's 2016/17 cherry production at 320,000 metric tons, up 30 percent from the previous year (USDA/FAS, 2016).

China's fruit production continues to increase, spurred by both market demand and supportive policies. Orchards are a focus of rural development initiatives in relatively poor hilly regions that cannot produce grains or other row crops competitively. China's Ministry of Agriculture formulated a "Layout Plan for China's Advantageous Agricultural Products" (covering 2003-2007 and 2008-2015) which included national strategic plans for apples, citrus, and tropical fruit to create industry clusters. These initiatives helped make China's western provinces the chief suppliers

of apples to its market (Gale, Huang, and Gu, 2010), and China's Minister of Agriculture praised the citrus initiative for reducing the market share of imported oranges in China (Han, 2011).

China's fruit marketing is improving as processing companies and supermarket chains become more involved in growing and procuring fruit. For example, a few companies have leased their own farms, and some supermarket chains have set up national procurement systems to ensure year-round supplies (Hu, 2010).

Agreements Expand Access

The United States was the pioneer in opening the China fruit market during the 1990s. However, the recent surge in fruit imports since 2007 coincided with China's entry into new trade agreements with fruit-supplying countries in Southeast Asia and the Southern Hemisphere.

U.S. oranges began appearing on fruit stands in China in the 1980s, before they were legally permitted (they entered through unofficial channels). After the United States negotiated a 1992 memorandum of understanding calling for import inspection and quarantine regulations to be based on sound science, China allowed the import of apples from Washington State in 1993 (USDA/FAS, 1995). During 1995-98, the United States gained access for apples from Oregon and Idaho, cherries from several Western States, and California grapes. A 1999 U.S.-China agreement that set the framework for China's membership in the World Trade Organization (WTO) opened China to citrus from select U.S. counties and lowered tariffs on fruit.

In June 2013, U.S. pears gained access to China. In 2015, access to China was expanded to include all types of apples grown in the United States. However, U.S. fruit also encountered problems in recent years. Access to China markets for California citrus was suspended between May 2013 and August 2014 over sanitary and phytosanitary (SPS)-related issues (USDA/FAS, 2014). Access to China's market for apples from Washington State was suspended due to pest concerns from August 2012 to October 2014.

In the most recent decade, bilateral and regional trade agreements cut tariffs on fruit imports from Southeast Asia and Southern Hemisphere countries.¹ China's trade agreement with the Association of Southeast Asian Nations (ASEAN) launched an "early harvest" program in 2004 that phased out tariffs, and fruit imports from these countries have been duty-free since 2007. Free trade agreements also cut China's tariffs for imports from Chile in 2006, New Zealand in 2008, and Peru in 2010. An agreement with Australia took effect late in 2015. In addition, China has an initiative on "south-south" cooperation that favors agricultural trade with developing countries—mostly in the Southern Hemisphere. China's "one belt, one road" ("new Silk Road") initiative also encourages agricultural trade and cooperation with countries in central and south Asia.

Looking Ahead: Positive Prospects To Grow China's Fruit Demand

The medium-term outlook for U.S. fruit sales to China is favorable. China's per capita fruit consumption is still only about two-thirds of the U.S. average (USDA/FAS, 2015). The country's five-year plan for 2016-2020 aims to move more rural people into cities while modernizing agriculture, and the economic growth model is emphasizing improvements in quality of life. Greater purchasing power and urban lifestyles will increase consumer demand for fruit. Greater use of e-commerce is widening marketing channels for imported fruit, and making it easier for consumers to order fruit from overseas.

China is upgrading inspection and quarantine and food-safety testing facilities at ports of entry, which may give an advantage to high-quality products but also could introduce more stringent rules and procedures for entry of fruit. Authorities plan to support upgrades of agricultural marketing and storage infrastructure, which may aid distribution of both domestic and imported fruit.

¹ See "China FTA Network," <http://fta.mofcom.gov.cn>.

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