



The U.S. Trade Situation for Fruit and Vegetable Products

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Summary

Over the last decade, there has been a growing U.S. trade deficit in fresh and processed fruits and vegetables. Although U.S. fruit and vegetable exports totaled more than \$10 billion in 2009, U.S. imports of fruits and vegetables were nearly \$16 billion, resulting in a gap between imports and exports of almost \$6 billion. This trade deficit has widened over time—despite the fact that U.S. fruit and vegetable exports have continued to rise each year—because growth in imports has greatly outpaced export growth. As a result, the United States has gone from being a net exporter of fresh and processed fruits and vegetables in the early 1970s to being a net importer of fruits and vegetables today.

A number of factors shaping current competitive market conditions worldwide, and global trade in fruits and vegetables in particular, partially explain the rising fruit and vegetable trade deficit. These include:

- a relatively open domestic import regime and lower average import tariffs in the United States, with products from most leading suppliers entering the U.S. duty-free or at preferential duty rates;
- increased competition from low-cost or government-subsidized production;
- continued non-tariff trade barriers to U.S. exports in some countries, such as import and inspection requirements, technical product standards, and sanitary and phytosanitary (SPS) requirements;
- opportunities for counter-seasonal supplies, driven in part by increased domestic and year-round demand for fruits and vegetables; and
- other market factors, such as exchange rate fluctuations and structural changes in the U.S. food industry, as well as increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, fruit and vegetable crops have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk). The 2008 farm bill provided additional support for specialty crop programs, as well as organic programs. The farm bill also included provisions intended to address existing trade barriers and marketing of U.S. specialty crops, including (1) provisions under USDA's Market Access Program (MAP) reauthorizing MAP funding to encourage domestic exports; and (2) Technical Assistance for Specialty Crops (TASC), reauthorizing the TASC program to address sanitary and phytosanitary (SPS) and technical barriers to U.S. exports, and providing mandatory funding.

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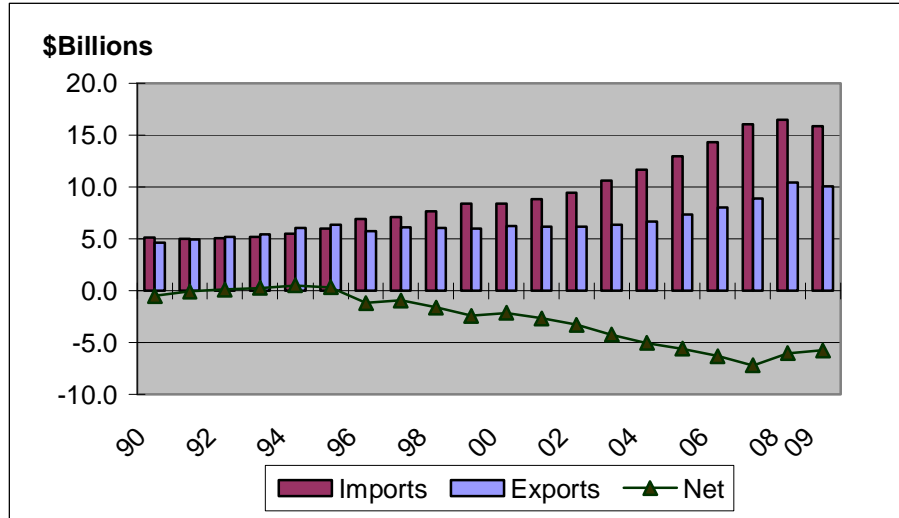
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Over the last decade there has been a growing U.S. trade deficit in fresh and processed fruits and vegetables. Although U.S. fruit and vegetable exports totaled more than \$10 billion in 2009, U.S. imports were nearly \$16 billion, resulting in a gap between imports and exports of almost \$6 billion for the year (**Figure 1**). This trade deficit has widened over time, as growth in imports has greatly outpaced export growth. As a result, the United States has gone from being a net exporter of fruits and vegetables in the 1970s to having a net trade balance in the mid-1990s to being a net importer today.

Figure 1. U.S. Fruit and Vegetable Trade, 1990-2009



Source: Compiled by CRS from data in the U.S. International Trade Commission's Trade DataWeb database (version 2.8.4). Includes fresh and processed products; excludes nuts.

A number of factors are shaping current competitive market conditions worldwide and global trade in fruits and vegetables. In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, specialty crops¹ have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk). The 2008 farm bill contained provisions for additional support for specialty crop programs (which include fruits and vegetables) and organic programs, as well as provisions intended to address existing trade barriers and marketing of U.S. specialty crops.

This report presents recent trends in U.S. fruit and vegetable trade, and highlights some of the factors contributing to these trends. This summary excludes trade data for tree nuts and processed tree nut products. Although not presented here, U.S. exports and imports of tree nuts and processed tree nut products (excluding peanuts) have shown continued increases, with a growing trade surplus of \$2.6 billion in 2009.

¹ Specialty crops include fruits and vegetables, tree nuts (not including peanuts), dried fruits, nursery crops, and floriculture, as defined by the Specialty Crops Competitiveness Act of 2004 (P.L. 108-465).

Fruit and Vegetable Trade Situation

Summary

The U.S. trade deficit in fresh and processed fruits and vegetables totaled \$5.7 billion in 2009, following a decade of steady gains in both exports and imports (**Table 1, Figure 1**). In the early 1990s, U.S. imports and exports of fresh and processed fruits and vegetables were more or less in balance, with some years showing the United States as a net exporter. This situation reversed in the mid-1990s. Despite rising U.S. exports of fruits and vegetables, growth in U.S. imports has outpaced export growth. Since the 1990s, imports have grown by an average of 6% each year, whereas exports grew an average rate of 4% during the same period, measured in terms of trade value (**Table 1**). The gap between imports and exports has widened, rising from a \$0.5 billion deficit to a \$5.7 billion deficit between 1990 and 2009. In the past few years, however, this trade deficit has narrowed from an all-time high deficit of \$7.4 billion in 2007.

Table 1. U.S. Fruit and Vegetable Trade, 1990-2007
(\$ billions)

Product Category	1990	1995	2000	2005	2008	2009	Avg. Annual % Change 1990-2009 ^a
Imports							
Fresh, dried, frozen fruit	1.3	1.8	2.6	4.3	5.0	4.7	7%
Fresh, dried, frozen, preserved veg.	1.8	2.3	3.2	4.8	6.2	6.5	7%
Processed fruits and vegetables	2.0	1.9	2.5	3.8	5.3	4.6	5%
Total	5.1	6.0	8.4	13.0	16.5	15.8	6%
Exports							
Fresh, dried, frozen, preserved fruit	1.4	1.7	1.8	2.1	4.4	4.2	6%
Fresh, dried, frozen, preserved veg.	2.2	2.9	2.5	3.2	3.0	3.0	2%
Processed fruits and vegetables	1.0	1.8	1.9	2.0	3.0	2.9	6%
Total	4.6	6.4	6.3	7.4	10.4	10.1	4%
Net Trade (exports less imports)							
Fresh, dried, frozen fruit	0.1	-0.1	-0.9	-2.2	-0.6	-0.4	—
Fresh, dried, frozen, preserved veg.	0.4	0.6	-0.7	-1.6	-3.2	-3.6	—
Processed fruits and vegetables	-1.0	-0.1	-0.6	-1.8	-2.3	-1.7	—
Total	-0.5	0.3	-2.1	-5.6	-6.0	-5.7	—

Source: Compiled by CRS from data in the U.S. International Trade Commission's Trade DataWeb database (version 2.8.4). Includes fresh and processed products as reflected in U.S. Harmonized Tariff Schedule (HTS) chapters 07, 08, and 20, excluding nut products (HTS 801, 802, 2008.11, and 2008.19). Totals may not add due to rounding.

a. Based on compound annual rate of growth, or the year-over-year growth rate, over period.

Product Overview

Table 1 breaks down U.S. trade into three major product categories: (1) fresh fruit, including dried, frozen, or otherwise preserved, (2) fresh vegetables, including dried, frozen, or otherwise preserved, and (3) processed fruit and vegetable products.

Since the mid-1990s, the value of U.S. fruit and vegetable exports has nearly doubled, with the largest gains in exports of fresh fruits and processed products. For fresh fruits, export gains were greatest for strawberries/berries, peaches/pears, apples, grapes, and other miscellaneous fresh fruit. For fresh vegetables, export gains were greatest for lettuce, spinach, tomatoes, potatoes, and legumes/beans. For processed products, export gains were for processed potato products, certain preserved vegetables, fruit juices and juice mixtures, and other processed fruit and vegetable products.

Gains in imports, however, have exceeded those for exports, as the total value of U.S. fruit and vegetable imports has more than tripled since the 1990s. Increased imports were greatest for fresh citrus, strawberries/berries, tropical fruits (excluding bananas), grapes, peaches/pears, plums/apricots, and apples. Imports of fresh vegetables and processed products were higher across most categories. Imports of preserved mushrooms and processed tomatoes declined over the period.²

Together, roughly one-half of this trade deficit for fruits and vegetables was composed of bananas and fresh tomatoes and other vegetables, including bell peppers. Given that the value of U.S. banana imports has remained largely unchanged, imports of fresh tomatoes and peppers, among other fresh and frozen vegetables, have accounted for the widening gap in U.S. trade.³ Other products with a large and increasing net trade value include other tropical fruits, grapes, asparagus, cucumbers, canned fruit, fruit juices and juice mixtures, olives, and miscellaneous fresh fruits and preserved vegetables.

Importing Country Overview

Table 2 breaks down U.S. fruit and vegetable imports from the top 10 supplying countries. In descending order (by the share of total import value in 2009), these included Mexico (34%), Canada (13%), Chile (9%), China (7%), Costa Rica (5%), Guatemala, Ecuador, and Peru (each with about 3%-4%), and Thailand and Spain (2% each). Other leading import suppliers were Brazil, Argentina, Colombia, Honduras, and the Philippines (for a combined total of 8%). All other importing countries accounted for about 9% of trade in 2009. The major imported products were tomatoes, peppers, bananas, other tropical fruits, potatoes, onions, garlic, cucumbers, melon, citrus, grapes, tree fruit, fruit juices, and various fresh and processed products.

² Does not include ketchup and tomato sauces (HTS 2103.2), of which the United States remains a net exporter despite increasing product imports.

³ Both U.S. and Canadian tomato growers initiated import injury cases against each other, which were resolved in 2002 with identical rulings of no material injury; a prior case brought by U.S. growers against Mexico was suspended. See USITC, "Import Injury Investigations Case Statistics (FY 1980-2008)," February 2010, http://www.usitc.gov/trade_remedy/documents/historical_case_stats.pdf.

Table 2. Country Suppliers of U.S. Fruit and Vegetable Imports

Country	1999	2009	1999	2009	%Chg.	Leading Product Imports of Fruits and Vegetables (2009)
	(\$ millions)		Share	Share	99-09 ^a	
			(percent)	(percent)		
Mexico	2,580	5,843	31%	34%	9%	Tomatoes, avocados, peppers, grapes, cucumbers, melons, berries, onions, other fruits/vegetables
Canada	957	2,270	11%	13%	9%	Potatoes, tomatoes, peppers, cranberries, cucumbers, other types of vegetables/fruits
Chile	640	1,542	8%	9%	9%	Grapes, cranberries, avocados, apples, berries, fruit juices, plums, cherries
China	197	1,205	2%	7%	20%	Fruit juices, processed fruit products, prepared/frozen vegetables/fruits, onions/garlic, preserved mushrooms.
Costa Rica	599	799	7%	5%	3%	Pineapples, bananas, orange juice, melons, tropical and preserved fruits and vegetables
Guatemala	239	719	3%	4%	12%	Bananas and tropical fruits, preserved and frozen fruits/vegetables, melons, tomatoes
Ecuador	359	588	4%	3%	5%	Bananas, other tropical and fresh/preserved fruits and vegetables, fruit juices
Peru	92	487	1%	3%	18%	Asparagus, other preserved/frozen vegetables, grapes, onions, tropical fruits
Thailand	212	394	3%	2%	6%	Pineapples, peaches, fruit juices, other tropical and fresh/preserved fruits/ vegs.
Spain	435	360	5%	2%	-2%	Olives, mandarins, peppers, other fresh/preserved fruits/vegetables
Brazil	227	309	3%	2%	3%	Orange juice, grapes, other fruit juices, tropical fruits and vegetables
Argentina	202	296	2%	2%	4%	Fruit juices, berries, olives, strawberries, grapes, garlic
Colombia	241	273	3%	2%	1%	Bananas, preserved/frozen fruits/vegetables, tropical products, fruit juices
Honduras	65	256	1%	1%	15%	Bananas, melons, other fresh/preserved fruits and vegetables
Philippines	144	212	2%	1%	4%	Fresh pineapples and juice, bananas, tropical fruits and vegetables, mixtures
Subtotal	7,189	15,554	85%	91%	8%	—
All Other	1,225	1,578	15%	9%	3%	—
Total	8,414	17,132	100%	100%	7%	—

Source: Compiled by CRS from data in the U.S. International Trade Commission's Trade DataWeb database (version 2.8.4). Includes fresh and processed products (HTS categories 07, 08, and 20), excluding nut products (HTS 801, 802, 2008.11, and 2008.19). Totals may not add due to rounding.

a. Based on compound annual rate of growth, or the year-over-year growth rate, over period.

Competitive Market Situation

A number of factors are shaping current competitive market and trade conditions worldwide, and may be contributing to trends in U.S. fruit and vegetable trade:

- a relatively **open U.S. import regime** and lower average import tariffs in the United States, with products from most leading suppliers entering the U.S. duty-free or at preferential duty rates;
- increased **competition from low-cost or subsidized production** of fruit and vegetable products;
- continued **non-tariff trade barriers to U.S. exports** in some countries, including restrictive import and inspection requirements, technical product standards, and sanitary and phytosanitary (SPS) requirements;
- opportunities for **counter-seasonal supplies**, driven, in part, by increased domestic and year-round demand for fruits and vegetables; and
- **other market factors**, such as exchange rate fluctuations and structural changes in the U.S. food industry, as well as increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

Domestic Import Regime

Lower tariffs on U.S. fruit and vegetable imports combined with relatively higher tariffs on U.S. exports into other countries, in part, may explain why U.S. export growth has not kept pace with import growth. The U.S. Department of Agriculture (USDA) reports that the global average tariff for fruits and vegetables is more than 50% of the import value.⁴ In the United States, however, about 60% of U.S. tariffs on fruits and vegetables are less than 5%. This compares to Japan and the European Union (EU), where more than 60% of import tariffs range from 5%-25%; additionally, nearly 20% of tariffs exceed 25%. Import tariffs in some developing countries are often higher, with more than 80% of tariffs ranging from more than 25% to over 100%.⁵ Countries with relatively high tariffs on fruit and vegetable imports include China, Egypt, India, Korea, and Thailand.

Most of the leading import suppliers of fruits and vegetables to the United States are granted trade preferences under an existing free trade agreement (Canada and Mexico, Australia, Chile, Peru, and several Central American and some Middle Eastern nations), a pending or negotiated free trade agreement (Colombia, Panama, Thailand),⁶ or other types of preferential arrangements (Argentina, Brazil, Ecuador, Thailand).⁷ Such trade preferences allow imports to the United States

⁴ B. Krissoff and J. Waino, "U.S. Fruit and Vegetable Imports Outpace Exports," *Amber Waves*, USDA, June 2005. Expressed as an average; actual tariffs may vary substantially across products and countries.

⁵ *Ibid.*

⁶ For information, see CRS Report RL34134, *Agriculture in U.S. Free Trade Agreements: Trade with Current and Prospective Partners, Impact, and Issues*.

⁷ For example, products from some countries are eligible for preferential treatment under the Generalized System of Preferences (see CRS Report RS22541, *Generalized System of Preferences: Agricultural Imports*). Products from some South American countries may benefit under the Andean Trade Preference Act.

to enter duty-free or at reduced rates, and may be contributing to rapid import growth. In some cases, duty-free or reduced tariffs provide an added advantage to supplying countries who may already benefit from lower-cost fruit and vegetable production compared to that in the United States.

Many of the countries that have entered into trade preference programs with the United States supply products such as bananas and other tropical fruits that are grown in limited supplies in the United States. Many also provide fruits and vegetables counter-seasonally (off-season) to production in the United States. However, there is concern that an increasing share of imports are now directly competing with domestically produced commodities throughout the year.

Significant gains in trade between the United States, Canada, and Mexico have followed the adoption of the North American Free Trade Agreement (NAFTA). Under NAFTA, additional market access was created for tomatoes and peppers, as tariffs were phased out or covered under a seasonal tariff-rate quota. Since the adoption of NAFTA in 1994, the volume of U.S. imports of tomatoes and certain other vegetables from Mexico has more than doubled; imports from Mexico of fresh peppers, including bell peppers, more than tripled.⁸ Imports from Canada also increased significantly but from a smaller base. During this same period, U.S. shipments of fresh tomatoes have declined to these two countries, while shipments of other types of vegetables have mostly increased, but from a smaller base. Rising consumer demand has also influenced imports, given the year-round availability of a wider diversity of consumer choices, including new products and varieties, new colors, mini-varieties, and hothouse-grown produce.⁹

Since the U.S.-Chile FTA entered into force in 2004, imports of Chilean fresh fruits and fruit juice have shown continued gains. Volume imports of some fruits and vegetables have risen (grapes and raisins, cherries, strawberries, cranberries, and other types of berries, pears, kiwi, citrus, apple and grape juice). However, volume imports of some products have decreased (apples, peaches, avocados, plums). Most imports from Chile continue to be supplied during the U.S. off-season. Imports under the U.S.-Dominican Republic-Central American (DR-CAFTA) FTA, which entered into force in July 2006, are expected to be limited since many of these countries already have duty-free access to the United States under previous trading arrangements, such as the Generalized System of Preferences (GSP) and the Caribbean Basin Economic Recovery Act.

Some U.S. produce growers have complained that the recent FTAs allow greater access to the United States without creating equal U.S. access to foreign markets.¹⁰ They further claim that with each FTA the U.S. produce sectors have been negatively impacted through higher imports, lower prices, and a growing trade deficit.

Global Competition

Among the leading U.S. fruit and vegetable import suppliers, China and most European countries do not benefit from preferential import treatment under current U.S. trade laws. However, fruit

⁸ Because of concerns about the effects of NAFTA on U.S. fresh tomato and pepper markets, the NAFTA Implementation Act (P.L. 103-182, Sec. 316) required annual monitoring of these two markets until January 1, 2009.

⁹ S. R. Cuellar, *Marketing Fresh Fruit and Vegetable Imports in the United States: Status, Challenges and Opportunities*, Cornell University, April 2002.

¹⁰ See, for example, T. Linden, "Ag Trade Surplus Wiped Out by Imports" (February 2005) and "Ag Export Surplus Continues to Shrink," (December 2004), *Western Grower & Shipper*.

and vegetable imports from these countries are growing, partly because of their lower costs of producing, packing, and/or processing fruits and vegetables, compared to producers in the United States. Among many developing countries, lower costs are generally associated with lower overall production and input costs, particularly for labor. Among EU countries, lower costs largely are a function of farm subsidies and payments along with other forms of government support for fruit and vegetable production, as part of the Common Agricultural Policy.

In China, average farm-level costs are low because the majority of farm production is labor-intensive on small-scale, low-technology operations, using little or no mechanized inputs. Labor is abundant and costs are low. Marketing costs for produce also are low, given only basic packing and packaging techniques, and lack of uniform product sizes and grading standards. At modernized facilities, certain capital and production technology costs are higher, but per-unit labor costs and overall input costs still remain much lower than in the United States. Given such differences, available cost data show that average per-unit production costs in China for tomatoes, peppers, and citrus are roughly one-tenth those in the United States.¹¹

By comparison, U.S. production costs are relatively high and have been increasing due to generally rising costs for energy and other farm inputs, but also because of what some analysis indicates has been an increasing regulatory regime, particularly in California, where a high portion of the nation's fruits and vegetables are grown. A survey of California agricultural producers ranked workers' compensation requirements, air quality, and land use regulations as the top three regulatory areas that have a perceived negative effect on farmers' financial, operational, and managerial aspects of production.¹² The study estimates that \$1 of every \$9 of farm capital investment goes toward regulatory compliance. On labor issues, another study ranked the United States among countries with the highest rates of workers' compensation and unemployment insurance.¹³ Immigration issues are also a key concern, which may be contributing to a growing perception of a shortage of available farm workers in some production areas, especially for harvesting tree fruits and specialty row crops.¹⁴

Farm costs in the EU also are relatively high. However, fruit and vegetable producers in most European countries directly benefit from support programs that effectively offset their production costs and allow them to become competitive on world markets. The EU's fruit and vegetable subsidies vary by commodity, but often include direct farm payments, compensation for further processing, co-financing of operational funds for producer organizations, export subsidies,

¹¹ Scott Rozelle et al., "Rising Demand, Trade Prospects, and the Rise of China's Horticultural Industry," 2007 Working Paper, http://iis-db.stanford.edu/pubs/21634/Rising_Demand_Trade_Prospects_Rise_of_Hort_NAAMIC_working_paper.pdf.

¹² S. Hurley et. al, *Analysis of the Regulatory Effects on California Specialty Crops: An Examination of Various Issues Impacting Selected Forest Products, Tree Fruit, Nut, and Vegetable Crop Industries*, California Polytechnic State University, January 2006, <http://cissc.calpoly.edu/research/49943FinalReport.pdf>.

¹³ S. Hurley, *Comparison between California and its Domestic and International Competitors with Respect to Key Labor Issues*, California Polytechnic State University, June 2004, <http://www.cissc.calpoly.edu/research/labor-final-report-6-30-04-3.pdf>. Other regulatory areas included water quality regulation, and pesticide application and registration.

¹⁴ Western Growers Association (WGA), "Western Growers Warns of Labor Shortage Crisis," *WGA Press Release*, September 13, 2005; California Farm Bureau Federation (CFBF), "Farm labor shortage approaches critical level," *CFBF AgAlert*, September 14, 2005. Among the reported reasons for this perceived worker shortage are increasingly competitive wages within both the agriculture sectors and between the agriculture and non-agriculture sectors, particularly higher-paying construction work given ongoing development. Also see CRS Report RL30395, *Farm Labor Shortages and Immigration Policy*.

promotional aid, and other types of support and financial aid.¹⁵ Commodities that benefit under such programs include tomatoes, cauliflowers, cucumbers, artichokes, olives, peaches, pears, plums, apples, citrus, grapes, and figs, among others. The total value of support notified to the World Trade Organization (WTO) for EU's fruit and vegetable sector (excluding wine and olive oil) is estimated at €9.5 billion for the 2005/2006 marketing year (about \$11.9 billion).¹⁶ Such support is considered to be "production distorting" by the WTO and is subject to reduction commitments. Comparable expenditures for the U.S. fruit and vegetable sectors were negligible.

In the United States, fruit and vegetable producers do not directly benefit from traditional federal farm support programs that might help offset their production costs. However, they may benefit indirectly from certain government research and farm assistance programs that are generally not considered "production distorting."¹⁷ The European Commission has proposed reforms to the current subsidy program for fruits and vegetables that could increase the sector's market orientation.¹⁸ Even with reforms, the EU's program would continue to provide government-funded income support and risk protection not similarly afforded to U.S. producers.

Most developing countries do not directly support their fruit and vegetable production. However, some have government-funded programs that help farmers obtain specific varieties, adopt better farming practices, provide research and agricultural extension services, promote exports, and provide market information. In some countries, preferential policies and support exist at the local government level, and may include production subsidies or income guarantees, or assistance with start-up costs.

Previous investigations by the U.S. International Trade Commission (USITC) have highlighted the increased competitive market and trade pressures on U.S. fruit producers from lower-cost foreign fruit and vegetable producers (such as those in China, Thailand, Chile, Argentina, and South Africa) as well as from countries with subsidized fruit and vegetable production (such as in the EU, including Spain).¹⁹ Import injury investigations initiated by the United States further highlight concerns that some countries might be supplying imports at prices below fair market value. Since the 1990s, dumping petitions filed by the U.S. fruit and vegetable sectors have included charges against imports of fresh tomatoes (Canada, Mexico), frozen raspberries (Chile), apple juice concentrate (China), frozen orange juice (Brazil), lemon juice (Argentina, Mexico), fresh garlic (China), preserved mushrooms (China, Chile, India, Indonesia), canned pineapple (Thailand), table grapes (Chile, Mexico), and tart cherry juice (Germany, former Yugoslavia).²⁰

¹⁵ For more detailed information of regulations governing EU's programs for fruits and vegetables, see Council Regulations (EC) 1182/2007 of 26 September 2007 and Commission Regulation (EC) No 1580/2007 of 21 December 2007. Also see, European Commission, "Reform of the Common Market Organisation for Fruit and Vegetables," at http://ec.europa.eu/agriculture/capreform/fruitveg/index_en.htm.

¹⁶ WTO, Committee on Agriculture, "Domestic Support: European Communities," G/AG/N/EEC/59, March 2, 2009. Reflects notified aggregate measure of support (AMS). For additional information comparing the U.S. and EU farm support programs, see CRS Report R40539, *Comparing U.S. and EU Program Support for Farm Commodities and Conservation*.

¹⁷ Background information is in CRS Report RL32746, *Fruits, Vegetables, and Other Specialty Crops: A Primer on Government Programs*.

¹⁸ For information, see the European Commission's "Reform of the Common Market Organization for Fruits and Vegetables" at http://ec.europa.eu/agriculture/capreform/fruitveg/index_en.htm.

¹⁹ USITC, *Conditions of Competition for Certain Oranges and Lemons in the U.S. Fresh Market*, Inv. 332-469, Jul. 2006; USITC, *Canned Peaches, Pears, and Fruit Mixtures: Conditions of Competition between U.S. and Principal Foreign Supplier Industries*, Inv.332-485, Dec. 2007. Reports available at <http://www.usitc.gov>.

²⁰ USITC, "Import Injury Investigations Case Statistics (FY 1980-2009)," February 2010, http://www.usitc.gov/trade_remedy/documents/historical_case_stats.pdf.

Many of these petitions were decided in favor of U.S. domestic producers and resulted in higher tariffs being assessed on U.S. imported products from some of these countries.

Non-Tariff Trade Barriers

In addition to tariff-related barriers to trade, market access of agricultural products may be restricted by non-tariff trade barriers, which may limit both U.S. exports to and imports from other countries. Non-tariff trade barriers vary widely by importing country and commodity, and may include, but are not limited to, import and inspection requirements, safety and product standards, and requirements regarding inputs, production, processing, and mitigation. Generally, individual country requirements are provided for under WTO agreements that allow governments to act on trade matters in order to protect human, animal or plant life or health, provided they do not discriminate or use restrictions as disguised protectionism.²¹

There are two specific WTO agreements dealing with food safety and animal and plant health and safety, and with product standards in general: (1) the Agreement on Sanitary and Phytosanitary (SPS) Measures, and (2) the Agreement on Technical Barriers to Trade (TBT). The SPS Agreement is designed to protect animals and plants from diseases and pests, and to protect humans from animal- and plant-borne diseases and pests, and food-borne risks. The TBT Agreement covers technical regulations, voluntary standards and procedures relating to health, sanitary, animal welfare, and environmental regulations.²² Actual SPS/TBT requirements span across several broad categories and types, but tend to vary widely depending on the commodity and the importing country (as shown in the box on page 11).²³

Among the more common SPS/TBT examples for produce imports and exports are restrictions due to pest or disease concerns, and requirements specifying certain post-harvest treatment and fumigation.²⁴ Other requirements that reportedly have inhibited U.S. fruit and vegetable exports to some countries are phytosanitary requirements, food safety protocols, and marketing standards.

A summary of some of the reported SPS/TBT barriers to U.S. produce exports follows:²⁵

- **disease transmission**—e.g., fire blight, brown rot, canker, potato wart, fungus, among others, and other unspecified diseases;

²¹ See WTO, “Understanding the WTO: The Agreements (Standards and Safety),” http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm4_e.htm.

²² The SPS Agreement entered into force on January 1, 1995, as part of the establishment of the WTO, following the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). The TBT Agreement resulted from the Tokyo Round in 1979.

²³ For more information, see CRS Report RL33472, *Sanitary and Phytosanitary (SPS) Concerns in Agricultural Trade*; USDA, *Analyzing Technical Barriers to Trade*, TB1876, March 1999; and F. J. Adcock, “Examining and Reducing Technical Barriers to Trade,” CNAS 98-3, Oct. 1998, Texas A&M University, <http://cnas.tamu.edu/publications/cnastbt1.pdf>.

²⁴ Examples within animal product trade include recent trade bans because of bovine spongiform encephalopathy (BSE), or “mad cow” disease, as well as the current EU ban of U.S. beef because of hormones used in production.

²⁵ USDA horticulture trade reports for select products and countries: USDA, *U.S. Specialty Crops Trade Issues*, annual reports to Congress (2008 and 2009), http://www.fas.usda.gov/info/speeches/031910spec_crops.pdf, and <http://www.fas.usda.gov/info/speeches/011609specialtycrops.pdf>. Also USDA, *FAS Guide To World Horticultural Trade*, Trade Issues Editions, Circular Series FHORT 1-05 (May 2005) and 4-03 (May 2004), submitted as a Report to Congress, as required under the Specialty Crops Competitiveness Act of 2004 (P.L. 108-465).

- **pest transmission**—e.g, codling moth, golden nematode, fruit flies, moths, among others, and other unspecified quarantine pests;
- **chemical and pesticide residues**—e.g., methyl bromide, hydrogen gas; also Maximum Residual Levels (MRLs) for certain pesticides;
- **treatment and mitigation requirements**—e.g., chemical and other treatment options, including fumigation and quarantine;
- **restrictive import and administrative procedures**—e.g., specific inspection requirements for import;
- **other administrative requirements**—e.g., protocols, risk assessments, waivers, licenses, import tolerances, packaging requirements;
- **import bans on products from specific producing areas**—e.g., because of specific pest or disease concerns particular to a region;
- **import bans on production inputs**—e.g., nursery stock, seeds;
- **product and/or processing specifications**—e.g., restrictions on the use of anti-microbials, sulfur dioxide, sorbic acid, potassium sorbate, biotech and genetic materials, wax coating, etc.; and
- **health risks**—depending on product and perceived risk.

Non-tariff barriers to trade remain a key concern to U.S. produce growers. For example, under the U.S.-Korea FTA, despite tariff liberalization and increases in tariff-rate quotas for many fruits and vegetables, phytosanitary barriers have restricted U.S. exports to Korea of most key fresh fruits, including apples, pears, peaches, and citrus.²⁶ Also, exports of U.S. fresh potatoes to Mexico can currently only be shipped within a 26-kilometer zone inside the U.S.-Mexico border.²⁷ Similar restrictions and other technical barriers also have limited U.S. fruit and vegetable exports with other key U.S. trading partners, including Argentina, Australia, Brazil, Canada, China, EU, India, Israel, Japan, Korea, Mexico, New Zealand, South Africa, Taiwan, and Venezuela.²⁸ Aside from governmental requirements, retailers in some countries have developed required standards and practices and require certification as a prerequisite for doing business. For example, EU's retail-based GLOBALGAP (formerly known as EUREPGAP) for fruits and vegetables specifies a list of requirements regarding traceability; recordkeeping; varieties and rootstocks; site history and management; soil and substrate management; fertilizer usage; irrigation; crop protection; harvesting; post-harvest treatments; waste and pollution management; recycling and reuse; worker health, safety, and welfare; environmental issues; complaint form; and internal audits.²⁹

²⁶ See Northwest Horticultural Council, 2009 Foreign Trade Priorities, <http://www.nwhort.org/TradePriorities.html>; and Report of the Agricultural Technical Advisory Committee on Trade in Fruits and Vegetables on the U.S.-Korea FTA, April 2007. See also comments submitted to the U.S. Trade Representative from Mark Powers, Northwest Horticultural Council, "Request for Public Comments to Compile the National Trade Estimate Report on Foreign Trade Barriers and Reports on Sanitary and Phytosanitary and Standards-Related Foreign Trade Barriers," Docket USTR-2009-0031 (www.regulations.gov).

²⁷ U.S. Potato Board, "Stock Potatoes—Export Long Range Plan," at <http://www.uspotatoes.com>.

²⁸ USDA, *U.S. Specialty Crops Trade Issues*, annual reports to Congress (2008 and 2009); and USDA, *FAS Guide To World Horticultural Trade* (2004 and 2005). Also see USTR's two reports for all traded products: *2010 Report on Sanitary and Phytosanitary Measures*, and *2010 Report on Technical Barriers to Trade*, at <http://www.ustr.gov/>.

²⁹ See GLOBALGAP requirements at http://www.globalgap.org/cms/front_content.php?idcat=9.

However, many U.S. trading partners point to U.S. phytosanitary and other technical requirements as possible barriers restricting imports of these same commodities from other countries. In the United States, USDA's Animal and Plant Health Inspection Service (APHIS) regulates fresh produce imports through phytosanitary certificates, importation rules, and inspections.³⁰ U.S. imports of some fresh fruits and vegetables also are subject to federal marketing orders that require written permits for imported fresh produce, or create mandatory grade, size, quality and maturity requirements that apply to domestic and imported products.³¹ For information, see CRS Report RL32746, *Fruits, Vegetables, and Other Specialty Crops: A Primer on Government Programs*.

Broad SPS/TBT Categories

SPS Categories:

- additives and pesticide residues/use;
- plant pests and diseases;
- microbiological contaminants;
- chemical contaminants;
- genetically modified plants;
- irradiation; and
- various overlapping technical requirements, such as labeling and standards, including Good Agricultural Practices (GAP) or land-use practices, use of third party auditors, etc.

TBT Categories:

- import quotas and administration (such as licensing and auctions);
- export limitations and bans;
- food laws, including quality standards, safety and industrial standards, and organic certification;
- input, process, and product standards, including domestic content and mixing requirements, rules-of-origin requirements;
- packaging standards and labeling requirements;
- laws and import procedures, including media advertising regulations;
- consumer and food safety regulations—e.g., labeling, packaging, pesticide residue testing, nutritional content labeling, and contamination prevention;
- measures to prevent consumer fraud—e.g., shipping and financial documentation, standards of identity and measurement, etc.

³⁰ 7 C.F.R. Part 319.56 requires written import permits for fresh produce and also lists detailed foreign quarantine notices for fruit and vegetables.

³¹ Agricultural Marketing Agreement Act of 1937, Section 8e. Currently applies to avocados, dates (other than dates for processing), hazelnuts (filberts), grapefruit, table grapes, kiwifruit, olives (other than Spanish-style), onions, oranges, Irish potatoes, plums (suspended), prunes (suspended), raisins, tomatoes, and walnuts.

Seasonal Supplies

As consumer demand for fruits and vegetables has grown, the United States has become a growing market for off-season fruit and vegetable imports. Most counter-seasonal trade occurs between the Northern and Southern Hemisphere countries, which often tend to have opposite production cycles. Improvements in transportation and refrigeration also have made it easier to ship fresh horticultural products. Counter-seasonal U.S. imports of fruits and vegetables are supplied by Chile, Argentina, Australia, and South Africa, but also to some extent Mexico and some Central American countries.

Counter-seasonal imports from these countries are said to complement U.S. production of fresh grapes, citrus, tree fruits, and berries. However, technological and production improvements are further influencing this trend. In particular, the development of early- and late-maturing varieties has expanded U.S. production seasons, allowing producers to grow many types of fruits and vegetables throughout the year. As the U.S. production season has expanded, the winter window for some imports has narrowed. As a result, imports of some fruits and vegetables are directly competing with U.S. production. These include fresh tomatoes, peppers, potatoes, onions, cucumbers, melon, citrus, grapes, apples, and other tree fruits. Imports of processed fruit and vegetable products, such as fruit juices and various processed fruits and vegetables, directly compete with U.S. processed products year-round.

Imports of counter-seasonal fruits and vegetables are generally considered to have a positive impact on U.S. consumer demand by ensuring year-round supply and by introducing new products and varieties, which often stimulate additional demand. Other perceived market benefits include lowering costs (given a wider supply network), improving eating quality, assuring food safety, conducting promotions, and reducing product losses. For example, imports of fresh tomatoes may have contributed to increased overall demand by providing for the introduction of new domestic varieties, including hothouse-grown tomatoes, that are valued by consumers for their taste, perceived higher and consistent quality, and wider year-round availability; similarly, imports of peppers, cucumbers, and sweet onions have contributed to increased demand through the introduction of new colors, mini-varieties, and other highly regarded product qualities.³²

This expansion in consumer choice has contributed to overall higher demand for fruits and vegetables. Between 1980 and 2005, per capita consumption of all fresh and processed fruits and vegetables increased from roughly 600 pounds to about 685 pounds per person.³³ Gains in consumption, in turn, necessitate the need for year-round supplies, resulting in higher counter-cyclical import demand. During the period from 1980 to 2005, imports as a share of total domestic consumption increased from about 24% to nearly 39% for all fresh fruits, and from about 9% to 14% for all fresh vegetables (**Table 3**). These averages mask even greater import gains for some commodities. Imports of grapes, asparagus, and garlic, for example, accounted for roughly 10% of consumption in 1980 and altogether now account for at least 50%. More recent USDA estimates show continued growth in imports as a share of all fruit and vegetable consumption in the United States.³⁴

³² S. R. Cuellar, *Marketing Fresh Fruit and Vegetable Imports in the United States: Status, Challenges and Opportunities*, Cornell University, March 2003, <http://marketingpwt.aem.cornell.edu/publications.html>.

³³ USDA, "Fruits and Vegetables," Per Capita Availability, February 2007, <http://www.ers.usda.gov/data/foodconsumption/FoodAvailSpreadsheets.htm>.

³⁴ USDA, ERS, <http://www.ers.usda.gov/briefing/fruitandtreeuts/trade.htm>.

There also is concern that the availability of imports may be lowering prices for fruits and vegetables because of increasing overall supplies. However, between 1980 and 2005, prices paid for fresh fruits and vegetables remained strong and, in many cases, about doubled for all fruits and vegetables, including processed products.³⁵ Although price changes may vary for individual commodities, prices have shown increases over the period overall.

Table 3. Import Share of U.S. Fresh Fruit and Vegetable Demand

Category	1980	1990	2000	2005
	(percent)			
All Fresh Fruit	23.9	30.5	38.3	38.5
All Fresh Vegetables	8.5	10.9	10.8	13.6
Apples	4.0	4.7	7.2	6.9
Asparagus	10.8	29.8	59.0	66.8
Citrus	1.8	3.4	10.9	17.5
Cucumbers	36.0	33.7	42.6	49.4
Garlic	12.5	17.4	29.0	48.9
Grapes	13.6	37.0	45.2	54.9
Lettuce	<0.5	<0.5	<0.5	2.0
Melon	9.9	14.2	22.6	23.2
Onion	5.5	10.1	9.1	11.0
Peaches/Pears	1.3	9.7	11.6	14.9
Peppers	26.5	19.7	22.2	33.5
Strawberries	2.8	4.0	5.6	7.1
Tomatoes	22.3	20.5	30.0	34.4

Source: USDA, Supply and Disappearance data tables, Feb. 2007, <http://www.ers.usda.gov/data/foodconsumption/FoodAvailSpreadsheets.htm>. Expressed as quantity of imports' share of total estimated disappearance.

Other Market Factors

Among other market factors widely known to contribute to shifts in global agricultural trade are exchange rate fluctuations and structural changes in the U.S. food industry, including increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

Generally, as the dollar depreciates against foreign currencies, U.S. exports become more competitive and relatively less expensive than commodities produced domestically in the importing country, indicating a subsequent increase in price competitiveness for U.S. exports or a relative increase in import prices. Conversely, as the U.S. exchange rate appreciates (stronger dollar), U.S. exports may become less competitive or relatively more costly.³⁶ Information from

³⁵ Bureau of Labor Statistics <http://www.bls.gov/cpi/>. Consumer price index data.

³⁶ For more information, see Kristinek, J., and D.P. Anderson, "Exchange Rates and Agriculture: A Literature Review," Working Paper 02-2, Feb. 2002, Texas A&M University, <http://www.afpc.tamu.edu/pubs/0/373/wp-2002-02.pdf>.

USDA's Agricultural Exchange Rate Data Set indicates that as the U.S. dollar has steadily depreciated each year since 2002, U.S. agricultural products, including fruit and vegetable exports, have likely become more price competitive. However, the extent to which this will actually result in reduced prices on imported products in a foreign country will ultimately depend on how much an exporter or importer is willing to pass on to customers.³⁷ Monetary policies within a country, such as China's fixed exchange rate, may also affect its export potential by influencing relative price differences between countries. Further appreciation of the Chinese exchange rate is expected to make imports more affordable, which could raise U.S. agricultural exports.³⁸

Other factors reportedly influencing produce trade are evolving business practices in how produce is marketed and sold. A USDA study highlights some of these factors for the produce industry.³⁹ They include increased consolidation and concentration in the retail and shipping sectors, and the emergence of new industry trade practices including increased use of fee-based services, additional packaging and certification requirements, increased use of contract and marketing agreements with buyers, and development of emerging technologies and improved transportation. The extent to which these factors may be influencing the individual produce sectors varies by commodity and also by marketing channel (e.g., retail versus food service sectors). Structural changes in the U.S. food industry are further influenced by other economic and market changes that are occurring, including increased diversification in supply sourcing and increased foreign investment and global integration by U.S. agribusiness firms.

A growing share of U.S. fruit and vegetable trade (both imports and exports) is carried out by U.S. and foreign multinational companies or enterprises. These companies may produce the products they trade, while some may only further process products and some companies only trade the products of other firms. Among the reasons why companies choose to extend their businesses globally are to build a global supply base to ensure continued, year-round supplies to meet demand, but also to source lower-cost production in countries with relatively lower input and technology costs, particularly for labor. These trends may have been facilitated by the cross-national economic and financial integration that has followed bilateral and multilateral agreements among countries.⁴⁰

The increasing importance of multinational companies and their role in international trade complicates an analysis of global trade statistics. This includes cases where a U.S. company has subsidiaries located overseas, where products are produced and processed, but marketed under the company's own branded labels; in other cases, a U.S. company may import foreign processed products made from U.S.-exported raw material abroad only to be re-imported to the United States as finished products. For example, a recent USITC import investigation highlights how U.S.-based Dole Food Company owns and operates fruit canneries in Thailand that rely largely on imported fruit from the United States to produce canned peach, pear, and mixed fruit products, which are repackaged into plastic jars and cups in Thailand, and then re-exported back to the

³⁷ USDA, "Annual Commodity Trade Weighted Exchange Rates," Apr. 2008, <http://www.ers.usda.gov/Data/ExchangeRates/Data/RealAnnualCommodityBasedExchangeRates.xls>.

³⁸ USDA, *China Currency Appreciation Could Boost U.S. Agricultural Exports*, WRS-0703, Aug. 2007, <http://www.ers.usda.gov/publications/wrs0703/>.

³⁹ USDA, *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, AER-795, 2001, <http://www.ers.usda.gov/publications/aer795/aer795.pdf>.

⁴⁰ Bloodgood, Laura, et al., "Trends in U.S. Inbound and Outbound Direct Investment," USITC Pub. 3870, July 2006.

United States in the form of retail-ready products.⁴¹ Thailand's competitive advantages in producing canned fruit are based primarily on relatively inexpensive labor and technological investments provided by Dole Food Company, which accounts for the majority of Thailand's peach and pear canning industry through its subsidiary Dole Thailand Ltd. Thailand is currently a leading global exporter of canned peaches, pears, and fruit mixtures, despite its insignificant domestic production of fresh peaches and pears.

Many U.S. companies are implementing business strategies that source complementary fruit and vegetable products globally, which some argue may compete with domestically produced product. An import injury investigation brought by U.S. mushroom processors highlights competition concerns by some domestic producers about competition from imports of transnational production by U.S.-based multinational companies. Among the marketers of preserved mushrooms participating in the case was General Mills, Inc., which imports a range of food products produced and processed by its subsidiaries overseas (in Indonesia and India among other countries), including preserved mushrooms that are marketed under its Green Giant brand. Among the reasons General Mills officials cite for establishing overseas operations are year-round product availability and lower labor costs.⁴²

Some companies do not own and operate foreign operations, but instead enter into licensing arrangements with other foreign companies who produce, pack, or process products, which are marketed under the company's own branded labels and either sold in the United States or in other foreign markets. Examples of such firms were described in another USITC import investigation into the global sourcing strategies among the major global suppliers of fresh oranges and lemons. Reasons cited by some U.S. produce companies for implementing global business strategies include the desire to source complementary fruit and vegetable products globally to meet year-round demand, reduce processing costs, and build an international customer network and brand recognition.⁴³

Congressional Action

Starting in 2005, the Specialty Crop Farm Bill Alliance began promoting recommendations for the 2008 farm bill, initially through the efforts of the United Fresh Produce Association.⁴⁴ These efforts were expanded to include 85 specialty crop organizations nationwide. The alliance's goal has been to enhance the competitiveness of U.S. fruits, vegetables, tree nuts, and other specialty crops by adding specific programs and provisions as part of the 2008 farm bill.⁴⁵

⁴¹ USITC, *Canned Peaches, Pears, and Fruit Mixtures: Conditions of Competition between U.S. and Principal Foreign Supplier Industries*, Inv. 332-485, December 2007. Most fruit imports to Thailand are supplied in institutional-size cans.

⁴² Hearing before USITC, regarding certain preserved mushrooms from Chile, China, India, and Indonesia, Inv. 731-TA-776-779, September 9, 2004.

⁴³ See, for example, "A Cooperative Evolution—Sunkist Competes in the Global Market," a presentation by Sunkist Inc. officials at the USDA Agricultural Outlook Forum, Feb. 20, 2004; and USDA, *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, AER-795, 2001.

⁴⁴ The association represents the produce industry, and resulted under a 2006 merger of the United Fresh Fruit & Vegetable Association and the International Fresh-Cut Association.

⁴⁵ See United Fresh Produce Association, http://www.unitedfresh.org/newsviews/farm_bill.

In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, fruit and vegetable crops have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk). The 2008 farm bill contained a new horticultural title that included new provisions for horticulture and organic production. Numerous provisions in this and other titles of the bill specifically address specialty crops and expand the amount of available funding for several major programs, providing nearly \$1 billion in additional funding (FY2008-FY2017).⁴⁶

Among the farm bill's key trade-related provisions are those that specifically address SPS/TBT issues in the specialty crops sectors, as well as those that generally address export market promotion and barriers to U.S. trade:

- **Market Access Program (MAP).** Reauthorizes MAP funding to encourage domestic exports; includes an amendment to cover organic products (Sec. 3102).
- **Technical Assistance for Specialty Crops (TASC).** Reauthorizes TASC program to address sanitary and phytosanitary (SPS) and technical barriers to U.S. exports. Provides mandatory funds: \$4 million FY2008, \$7 million FY2009, \$8 million FY2010, and \$9 million FY2011-FY2017. Requires an annual congressional report describing factors that affect specialty crops exports (Sec. 3203).

In addition, the farm bill provides for increased market data and information on the specialty crops sectors (Secs. 10107 and 10103) and addresses specialty crop food safety and related research issues (e.g., Secs. 7311, 10105, and 10109). The bill also amends current marketing orders for avocados (Sec. 10108) and clementines (Sec. 10102), governing grades and standards for these commodities and requiring that imports meet similar standards.

Additional information on these and other enacted farm bill provisions directed to the specialty crop sectors are described in CRS Report RL33520, *Specialty Crops: 2008 Farm Bill Issues*.

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⁴⁶ Two SPS-related provisions that were proposed as part of the Senate-reported farm bill (H.R. 2419), however, were dropped during conference negotiations. One provision proposed that USDA and the U.S. Trade Representative increase attention to specialty crop SPS trade issues and develop a strategic risk management framework. Another provision would have required the Government Accountability Office (GAO) to investigate the impact on specialty crops of reducing foreign trade barriers and to prepare a strategy for addressing the issue.