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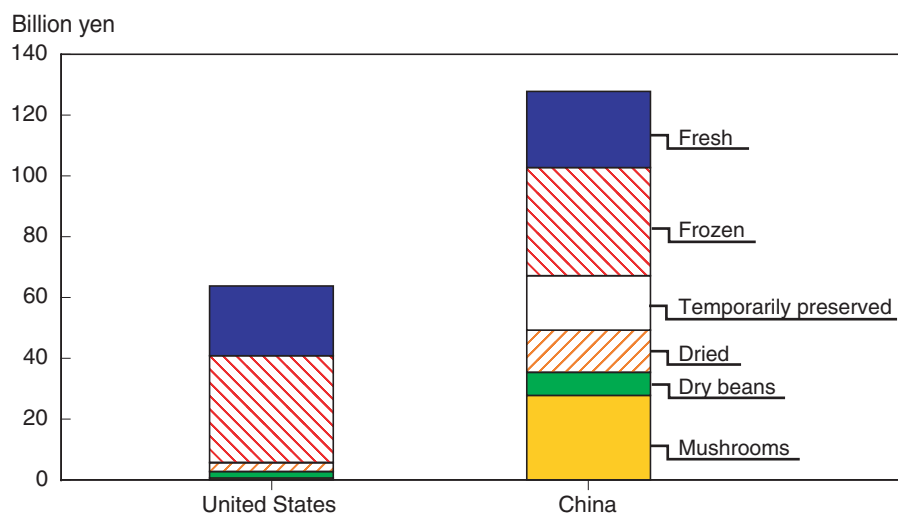
	Quantity	Value	Unit value
	<i>Metric tons</i>	<i>Bil. yen</i>	<i>Yen/kg</i>
Potatoes, processed, frozen	259,817	29.32	116
Mushrooms, fresh	37,202	26.04	754
Broccoli, fresh/chilled	80,337	14.34	182
Green soybeans, frozen	70,767	13.29	194
Mushrooms and truffles, dried	11,734	11.62	1,021
Asparagus, fresh/chilled	22,452	11.54	518
Pumpkins, fresh/chilled	138,465	10.70	77
Vegetable mixtures, provisionally preserved	90,242	10.32	111
Vegetable mixtures, dried	21,889	8.91	402
Onions and shallots, fresh/chilled	226,815	8.42	39
Taros, frozen	53,691	6.95	128
Sweet corn, frozen	49,483	6.83	140
Peppers, fresh/chilled	12,731	5.59	565
Burdock root, fresh/chilled	78,025	5.04	65
Mung beans, dried	51,606	4.64	91
Spinach, frozen	43,336	4.53	111
Beans, except soy, frozen	33,046	4.44	138
Peas, fresh/chilled	18,411	3.39	196
Cucumbers, provisionally preserved	50,673	2.86	55
Leeks, fresh/chilled	27,286	2.78	130
Bamboo shoots, dried	2,955	2.77	103
Garlic, fresh/chilled	27,298	2.72	934
Osmund (fern), dried	2,218	2.63	1,153
Adzuki beans, dried	28,061	2.17	80

Note: Average for burdock based on 1999-2001 data only.

Source: Japan Tariff Association, *Japan Exports & Imports*.

Figure 7.2

**Japan's imports of vegetables from leading exporting countries, average 1996-2001**



Source: Japan Tariff Association, *Japan Exports & Imports*.

potato products, fresh broccoli, fresh and dried onions, frozen and dried sweet corn, and asparagus are the leading commodities. New Zealand is the third most important supplier, exporting pumpkins, fresh onions, frozen sweet corn, and fresh peppers.

Seasonal differences are a factor in Japan's vegetable imports, especially of asparagus, with large Southern Hemisphere and tropical shipments from Oceania and Southeast Asia. Among the 10 largest suppliers to Japan, New Zealand, Thailand, and Australia have seasonal advantages. However, their market share, like that of most countries except China, tended to decline slightly over the 1994-2001 period.

Tariffs on most vegetables are 3 percent for fresh imports, 6 percent for frozen imports, and 9 percent for provisionally preserved and dried imports. Higher tariffs apply to potatoes and sweet potatoes, sweet corn, taro, some mushrooms, frozen and preserved burdock, and frozen peas and beans. The highest tariff is 12.8 percent for sweet potatoes (table 7.2).

These tariffs generally apply to both developed and developing countries. Dried vegetables are an exception: tariffs are zero for the least-developed countries, except for sweet corn, taros, shiitake mushrooms, and sweet potatoes. Fresh matsutake mushrooms and fresh burdock have a zero tariff for all developing countries.

Fresh onions are subject to a gate price system, under which importers of onions arriving with an import unit value below the gate price must pay the difference between the gate price and the import unit value. If the import unit value is low enough, however, a simple tariff (8.5 percent) is applied. If the import unit value is above the gate price, no tariff is applied. The system is designed to protect Japan's onions from competition from similarly priced imported onions, but not from very inexpensive or premium onion imports.

Japan has administered a quota on imports of dried beans and peas (except chickpeas and lentils) for many years. Within the quota, a tariff of 10 percent applies. Outside the quota (120,000 tons per year), the tariff is 354 yen/kg (\$2,927 per ton in 2001). The quota protects domestic production, primarily of Azuki and kidney beans.

Besides the commodities affected by the quotas and the special case of onions, Japan's tariff regime does not constitute a major barrier to vegetable imports. Far more important are phytosanitary barriers that affect the imports of fresh vegetables. Imports of some vegetables are banned from most countries, including the United States, because of disease restrictions. Fresh cucumbers, eggplants, potatoes, and other important vegetables are not imported in large quantities because of these restrictions. Other vegetables are affected by fumigation requirements designed to kill insects and other pests at the arrival port in Japan. Fumigation often seriously damages the quality of the imported vegetables, especially if they are soft or light-colored. Lettuce and cauliflower have been particularly affected. Japan's officials fumigate whenever they see insects in a shipment, even if the insect is already endemic to Japan (Ito and Dyck, 2002).

**Table 7.2—Tariffs on vegetables and fruits**

	Fresh			Frozen			Provisionally preserved			Dried					
	Percent									1/	2/	3/			
<b>Vegetables:</b>	1/	2/	3/										1/	2/	3/
Potatoes	4.3			8.5			9			12.8			10	0	
Sweet potatoes	12.8			12			12.8			12.8					
Tomatoes	3			6			9			9			9	0	
Onions 4/	8.5			6			9			9			9	0	
Garlic and leeks	3			6			9			9			9	0	
Cabbage and broccoli	3			6			9			9			9	0	
Lettuce and spinach	3			6			9			9			9	0	
Carrots and turnips	3			6			9			9			9	0	
Burdock	2.5	0	0	12			12			9			9	0	
Cucumbers	3			6			9			9			9	0	
Peas and beans 5/	3			8.5			9			10					
Artichokes	3			6			9			9			9	0	
Asparagus	3			6			9			9			9	0	
Peppers and eggplants	3			6			9			9			9	0	
Celery	3			6			9			9			9	0	
Sweet corn	6			10.6			9			9			yen/kg		
Pumpkins	3			6			9			9			9	0	
Lotus roots	3			6			9			9			9	0	
Taros	9			10			9			9			9	9	
Matsutake mushrooms	3	0	0	6			9			9			9	0	
Shiitake mushrooms	4.3			6			9			12.8					
Other mushrooms	4.3			6			9			9			9	0	
<b>Fruits:</b>	In-season			Out-of-season											
	1/	2/	3/	1/	2/	3/	1/	2/	3/	1/	2/	3/	1/	2/	3/
Bananas 6/	25	20	0	20	10	0	12			25/20			3	0	0
Dates	0						12			12			0		
Figs	6						12			12			6	5	0
Pineapples	17						23.8			12			7.2	7.2	0
Avocados 7/	3	3	0				12/7.2	12/3.6	0	12	10	0	3	3	0
Guavas and mangoes 7/	3	0	0				12/7.2	12/3.6	0	12	10	0	3	0	0
Oranges 6/	32			16			12			32/16			32/16		
Mandarins/tangerines	17						12			17			17		
Lemons	0						12			0			0		
Limes	0						12			0			0		
Grapefruit 6/	10			10			12			10			10		
Grapes 6/	17			7.8			12			12			1.2		
Melons	6						12			12			9		
Papaws/papayas 7/	2	2	0				12/7.2	12/3.6	0	12	10	0	7.5	7.5	0
Apples	17						12			12			9		
Pears	4.8						7			12			9		
Apricots	6						12			12			9		
Cherries 8/	8.5						13.8			17			9		
Peaches	6						7			12			9		
Plums	6						12			12			2.4		
Strawberries 7/	6						9.6/12			12			9		
Berries 7/	6						9.6/6			12			9		
Currants/gooseberries 7/	6						9.6/6			12			9		
Cranberries	6						12			12			9		
Kiwi	6.4						12			12			9		
Durians, rambutan, passionfruit, etc. 7/	5	2.5	0				12/7.2	12/3.6	0	12	10	0	7.5	7.5	0
Persimmons	6						12			12			9		

**Notes:**

Not an authoritative source for Japan's tariffs. For that, see Japan Tariff Association, *Custom Tariff Schedules of Japan*.

1/ If preferential tariffs exist, the column applies to developed country exports.

2/ If preferential tariffs exist, the column applies to developing country exports; if not, it applies to all countries.

3/ If preferential tariffs exist, the column applies to least-developed country exports.

4/ Tariffs are zero if the import unit value exceeds 73.7 yen/kg; 8.5 percent if the import unit value is less than 67 yen/kg; and the difference between 73.7 and the import unit value if import unit values lie between 67 and 73.7 yen/kg.

5/ A tariff-rate-quota is in effect for dried beans and peas. Within the quota, the tariff is 10 percent. Outside the quota, the tariff is 354 yen/kg.

6/ Seasonal tariffs apply to one or more of the processed categories (frozen, provisionally preserved, or dried), indicated by two tariffs separated by a /.

7/ Tariffs differ in one or more processed categories, depending on whether sugar has been added. The first tariff refers to product with sugar added, and the second to product without added sugar. Tariffs are separated by a /.

8/ Tariff in the frozen category is for sour cherries containing added sugar. Tariff on other cherries is 12 percent.

Source: Japan Tariff Association, *Custom Tariff Schedules of Japan*, 2002.

## Future Prospects for Japan's Vegetable Trade

Japan's trade in vegetables is likely to grow in the future. Consumption will be flat or decline (as the population begins to decrease), but Japan's production is relatively high cost and vulnerable to international competition.

Import penetration is already high in the provisionally preserved, dried, and frozen vegetable categories, but low among fresh vegetables. Fresh vegetables offer the principal opportunity for trade growth. The major barrier to their import is the existence of stringent phytosanitary barriers. Assuming that these barriers can be overcome, several factors influence the import potential of vegetables:

- Japan's consumers put a very high value on freshness. This is one of the main strengths of Japan's own vegetable production, which increases the probability of very fresh delivery. Among exporting countries, the emphasis on freshness gives a major advantage to the four economies geographically close to Japan: South and North Korea, Taiwan, and eastern China. North Korea lacks the infrastructure for large-scale trade. The other three economies are well-connected to Japan by shipping routes.
- Japanese consumers also emphasize the quality, visual perfection, and taste of vegetables. Again, this favors domestic producers, who know their customers well. Extra quality adds to both the cost and the riskiness of vegetable production. If a costly, high-quality vegetable is being produced just for one market (e.g., only for export to Japan), there is more risk than if it is produced for two or more markets. Economies with large domestic markets that offer a price premium for quality can provide a second market, additional to Japan. Examples are Taiwan, South Korea, the Netherlands, the United States, and a few other wealthy economies. This is less true for China.
- Naturally, other things being equal, Japan's consumers prefer lower prices. This favors exporting from regions such as eastern China, parts of Southeast Asia, and Mexico. To a lesser extent, exports from the United States, South Korea, and Taiwan also benefit from being priced lower than domestic produce in Japan.
- Tariffs vary by country of origin, in some cases. Japan applies tariffs bound under the WTO process to almost all countries, whether or not they are WTO members. The important exception is nearby North Korea, whose horticultural exports face significantly higher tariffs than exports from the rest of the world. Japan also grants two levels of preferential tariffs, chiefly for dried vegetables; developing countries can export these products to Japan with tariffs lower than the WTO bound tariffs, and a group of least-developed countries can sometimes export to Japan with no tariff at all (table 7.2). Among the main exporting areas, China, Southeast Asian countries, and South Africa benefited from preferential tariff treatment as developing countries (as of 2000), while the United States, the EU, South Korea, Taiwan, Australia, and New Zealand faced higher tariffs.
- Finally, stability of supply is very important to Japan's middlemen and retailers. This encourages them to diversify their sources of supply, in order to avoid being left without vegetables in the event of a weather

problem in one producing area. Firms also wish to avoid seasonal interruption of supplies. Thus, a supply network that includes imports as well as domestic production has advantages for distributors, because it reduces the risk from bad weather in Japan. Southern Hemisphere producers help provide diverse supply bases as well as offering vegetables in Japan's off-seasons.

These factors point to growing imports for Japan, particularly as production in eastern China achieves higher levels of quality. However, the insistence on freshness and quality is likely to support continued large-scale production in Japan itself indefinitely, and a gradual increase in imports and decrease in domestic production is much more likely than a sudden collapse of Japan's production.

## Trade in Fruits

Japan's fruit/nut imports,<sup>3</sup> almost \$2 billion in 2001, have grown slowly and erratically in volume over the last decade. The leading fruit imports, in volume and value, are bananas, grapefruit, lemons, and oranges (table 7.3). Kiwifruit and cherries are important high-value imports, and pineapples add a large volume. The leading nut imports are chestnuts and almonds.

Japan's fruit trade can be divided into five categories: nuts, dried fruit, provisionally preserved fruit, frozen fruit, and fresh fruit (fig. 7.3). Import quantities of nuts, dried fruits, and provisionally preserved fruits are fairly stable, but frozen and fresh fruit imports have been growing. Import growth in these categories is occurring because of the introduction of new fruits into wide use in Japan, supplied by imports; new uses of familiar fruits, especially of

**Table 7.3—Japan's leading fruit and nut imports, 1996-2001 average volume, value, and unit value**

	Quantity	Value	Unit value
	<i>Metric tons</i>	<i>Bil. yen</i>	<i>Yen/kg</i>
Bananas	979,388	59.65	61
Grapefruit	258,312	27.02	105
Lemons	86,549	14.40	167
Oranges	125,632	13.92	114
Chestnuts	34,264	12.81	373
Cherries	14,223	10.96	792
Kiwifruit	41,220	10.51	255
Almonds	20,397	8.95	447
Other frozen fruit	30,653	8.50	279
Other fruits and nuts, provisionally preserved	39,520	8.27	211
Pineapple	98,264	5.63	57
Raisins	29,960	5.60	185
Strawberries, frozen	28,918	5.26	183
Walnuts	8,898	4.75	535
Prunes	18,491	4.64	250
Strawberries, fresh	5,141	4.32	845
Melons	33,781	3.78	112
Mangoes	9,162	3.08	337
Avocados	10,250	2.62	262

Note: Unit value is the average of annual unit values calculated for the 6 years 1996-2001.

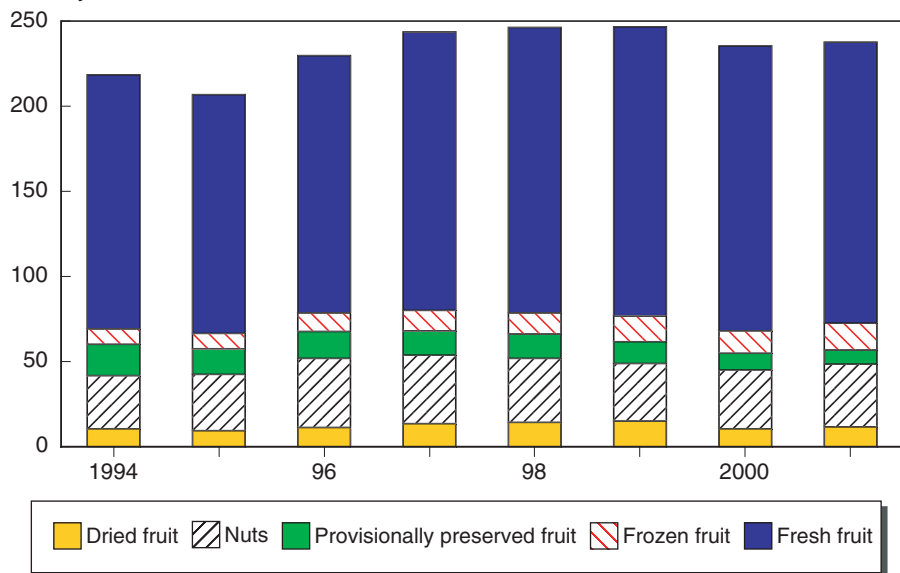
Source: Japan Tariff Association. *Japan Exports & Imports*.

<sup>3</sup> Data on Japan's imports in the following pages come from Japan Tariff Association, *Japan Exports & Imports*, as provided electronically by the World Trade Atlas.

Figure 7.3

### Japan's fruit and nut imports

Billion yen



Source: Japan Tariff Association, *Japan Exports & Imports*.

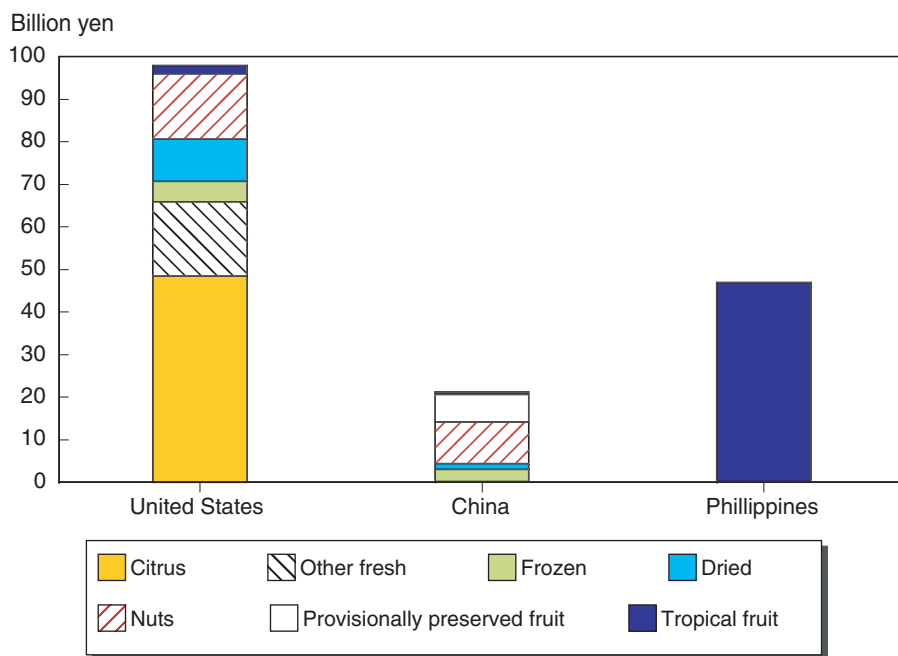
imported frozen fruit; imports of fresh fruit in the off-season; and competition that imports are giving to domestic products on price and quality.

The United States and the Philippines dominate Japan's imports, together supplying over 55 percent of the total value. Philippine exports are fresh tropical fruits, mainly bananas, followed by pineapples and mangoes (fig. 7.4). U.S. exports are diverse, spread across all the categories except provisionally preserved fruits. Citrus fruits, led by grapefruit, constitute over 40 percent of U.S. exports to Japan by value. Besides citrus, the United States is the leading supplier of other fresh fruits, frozen and dried fruits, and nuts.

Both the value of Japan's total fruit/nut imports from the United States and the share of total import value accruing to the United States have fallen in recent years. From 1994 to 2000, the U.S. share of fruit/nut imports fell by almost 9 percentage points, from 47 to 38 percent, although the share increased in 2001 to 39.8 percent. Japan's imports from South Korea and Taiwan also fell, but imports from the Philippines, China, Mexico, Ecuador, New Zealand, South Africa, and Chile each grew by more than 1 percent of Japan's total import value. From 1994 to 2000, imports from South Africa tripled in value, and those from Mexico and Chile doubled. Fruit imports from South Africa, Chile, and New Zealand increased in part because these countries have growing seasons opposite to Japan's. Increased imports from the Philippines and Ecuador were chiefly bananas. China's trade with Japan increased mainly because it displaced provisionally preserved fruit that previously was imported from Taiwan and South Korea. Preferential tariffs for developing countries are not as frequent as for vegetables. However, preferential tariffs apply to almost all the potential banana-supplying coun-

Figure 7.4

**Japan's fruit and nut imports from leading countries, 1996-2001 average**



Source: Japan Tariff Association, *Japan Exports & Imports*.

tries, reducing the effective import tariff to 10 percent out of season and 20 percent in season.

Imports supplement and compete with Japan's own fruit and nut production, especially of oranges, kiwifruit, cherries, and chestnuts. Trade in some fresh fruits important in Japan's diet is very small, that is, trade in apples, pears, peaches, persimmons, and mandarin oranges. This reflects both the strength of Japanese production and the phytosanitary barriers maintained by Japan.

Tariffs on fruits range from 0 to 32 percent (table 7.2), and are generally higher than for vegetables. No tariffs are collected on dates, lemons, and limes. Some fruits are tariff-free from the least-developed countries, and tariffs are sometimes lower for all developing countries than for imports from developed countries. Tariffs on fresh oranges, fresh grapes, and bananas are adjusted seasonally. Tariffs on oranges are 32 percent from December 1 to May 31, and 16 percent otherwise. Grape tariffs are 17 percent from March 1 to October 31, and 7.8 percent otherwise. Banana tariffs are 20 percent from October 1 to March 31, and 10 percent otherwise.<sup>4</sup> Besides grapes and oranges, tariffs are relatively high (17 percent) for fresh apples, mandarin oranges, and pineapples.

Aside from the tariff on oranges, the main barriers to fresh fruit imports into Japan are phytosanitary. Phytosanitary regulations protect against the introduction of diseases into Japan that could hurt domestic production. Japan's application of these regulations is very strict, requiring expensive protocols that farms in foreign regions, where a disease is known to exist, must follow in order to export to Japan. The protocols include onsite inspection by

<sup>4</sup> These tariffs apply to imports from developing countries. Higher tariffs apply to imports from developed countries, and imports from least-developed countries face a zero tariff.



Japan's authorities. Paying for the required changes in farm practice and inspections adds considerably to the cost of imported fruits in Japan, and makes them less competitive against domestic products. Japan also has refused to allow procedures agreed to for one variety of a fruit (or vegetable) to be recognized for other varieties of the same fruit. This means that separate testing and application procedures must be developed for each variety, adding to the expense of trade and delaying the beginning of trade in a given variety, sometimes for several years. In 2000, Japan agreed to allow most varieties of tomatoes, and all apple and nectarine varieties, to be imported following the protocols laid down for individual varieties prior to that date.

### **Future Prospects for Japan's Fruit Trade**

Prospects for fruit trade vary significantly by category. Overall, consumption is unlikely to increase and may decrease; Japan's population growth has slowed to near zero, and the government projects that a population decline will begin before 2010. Import penetration for processed and simply preserved fruits is already high and may not grow in the future. The trade in fresh fruits is the most likely to grow. The main opportunities for growth are for the temperate fruits, including apples, pears, peaches, persimmons, plums, cherries, and strawberries. In those markets, if phytosanitary barriers are reduced or met, the same attributes demanded in vegetables will be important to increasing the flow of imports—freshness, quality and visual perfection, taste, price, and stability of supply.

# Conclusions and Prospects for the Future of Fruit and Vegetable Trade

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Trade in fruits and vegetables has become steadily more important over the last decades. The composition, volume, and direction of this trade have changed as incomes and insistence on quality have grown on the demand side, while technology and trade agreements have influenced the supply side. Lower prices and greater availability of produce year-round, in tandem with increasing incomes, have enhanced the array of fruits and vegetables in the global consumer's basket of goods. Other factors, such as concern for a healthy diet and improved handling and transportation, have furthered the globalization of fruit and vegetable trade.

Globalization of markets is likely to continue as the basic factors of supply combine with innovations in technology and lower trade barriers, enabling suppliers to meet the preferences of a more affluent clientele. Developed countries will continue to dominate global trade in fruits and vegetables, but new varieties will find their way into the diets of the relatively affluent everywhere.

High per capita income, seasonal variation in production, and an aging population's demand for quality fruits and vegetables will continue to make the EU a leading world importer. Because of its numerous preferential trade agreements with neighboring countries in the Mediterranean basin and former colonies, however, exports to the EU will not likely increase much from countries not included in the agreements (such as the United States). Meanwhile, EU exports of fruits and vegetables are not likely to be restricted by WTO volume or value limits on subsidized exports as EU members have easily met their commitments and are likely to continue to do so. Thus, continued surplus production of some fruits and vegetables in the EU could still be exported onto the world market with EU export subsidies.

Continued growth in the NAFTA market will allow for more fruits and vegetables to be both exported and imported by the United States. U.S. income growth will continue to stimulate fruit and vegetable imports even with a depreciating U.S. dollar. An appreciating U.S. dollar would inhibit exports in the short run, while stimulating imports. Trade growth in the fresh tomato market can be attributed to NAFTA, and lower barriers to trade will continue to allow imports to help fill the demand for high-quality fresh tomatoes in the United States. NAFTA is a good example of how a regional trade agreement can spur trade growth in fruits and vegetables; trade between the NAFTA members for all classes of fruits and vegetables exceeded the growth of exports and imports involving countries outside NAFTA.

In Asia, the geographical distribution of trade will likely continue to change as China becomes a larger importer and exporter and increases the quality

of its produce. China's trade in vegetables and fruits is increasing; its recent investment in the sector has resulted in competitive products and points toward a greater presence for China in global markets. At the same time, a growing internal demand, and shortcomings in China's marketing and distribution system, will likely result in rising vegetable and fruit imports, at least in the near term. In particular, if trade barriers are lowered or removed, China's consumption and trade of fruits and vegetables may increase.

Japan will continue to play an important role in the global imports of fruits and vegetables, in part because its domestic production is relatively high cost and vulnerable to international competition. Import penetration is already significant for provisionally preserved, dried, and frozen vegetables and for processed and simply preserved fruits. The trade in fresh produce, particularly fresh vegetables and temperate fruits such as apples, pears, peaches, persimmons, plums, cherries, and strawberries, offers the principal opportunity for growth. In those markets, if phytosanitary barriers are reduced or met, the attributes of freshness, quality and visual perfection, taste, price, and stability of supply will be important to raising the flow of imports. Developed countries, particularly the United States, will be important suppliers of increased Japanese imports because of the range and quality of their produce, although China is becoming an important competitor as its quality improves.

The global exchange of fruits and vegetables seems assured of an upward trend if current tariff barriers are substantially reduced. Growing regional trade agreements, an increase in negotiated bilateral free trade agreements, and further liberalization as a result of current WTO negotiations will also work to lower barriers to trade, allowing fruits and vegetables to enter markets once unattainable.

In the final analysis, it will be per capita income growth and freer trade—stimulating new technology and lowering prices—that enable a greater variety and quantity of fruits and vegetables to reach more markets than ever before. For the United States, the exchange rate will play an important role in variations in its positive long-term export trend. U.S. fruit and vegetable trade is in a good position to profit from higher exports through improved technology and marketing, while U.S. consumers will benefit from a greater volume and variety of fruits and vegetables at lower prices. However, the number of competitors in the global market is growing, with China the country most likely to compete for markets where the United States has traditionally been a major supplier.

## References

- AgraEurope Weekly*. "Fruit and veg. regime simplified, but costs rise," November 2000. (Publishers: Agra Europe, 80 Calverly Road, Tunbridge Wells, Kent, TN1 2UN, UK.)
- AgraEurope Weekly*. "Further Fiddling with Fruit and Vegetables CMO," July 14, 2000.
- Agra Europe. *CAP Monitor*. Fruits and Vegetables, 13A-1 to A-8.
- AgraEurope. *CAP Monitor*. Processed Fruits and Vegetables, 13B-1 to B-6.
- Agricultural Marketing Service International Service Website.  
<http://www.ams.usda.gov/international>
- Agriculture and Agri-Food Canada. "Horticulture - Situations and Trends - Overview of Canadian Horticulture Industry," January 2004.  
[http://www.agr.gc.ca/misb/hort/trends-tendances/pdf/ov02\\_03\\_e.pdf](http://www.agr.gc.ca/misb/hort/trends-tendances/pdf/ov02_03_e.pdf)
- Ballenger, Nicole, Bill Coyle, William Hall, Brian McGregor, and Roy Hawkins. "Transportation Technology Eases the Journey for Perishables Going Abroad," *Agricultural Outlook*, January-February 1999.
- Barichello, Rich. "Anti-dumping in Agriculture between Canada and The U.S.: Two Cases of Tomatoes." Paper presented at Keeping the Borders Open, Eighth Agricultural and Food Policy Information Workshop, March 7-9, 2002, Puerto Vallarta, Mexico.
- Blisard, Noel, Biing-Hwan Lin, John Cromartie, and Nicole Ballenger. "America's Changing Appetite: Food Consumption and Spending to 2020," *Food Review*, Vol. 25, No. 1, USDA, ERS, Spring 2002, pp. 2-9.
- Bredahl, Maury, Andrew Schmitz, and Jimmy S. Hillman. "Rent Seeking in International Trade: The Great Tomato War." *American Journal of Agricultural Economics*, Vol. 69 (1987), pp. 1-10.
- Calvin, Linda, and Roberta Cook (coordinators), Mark Denbaly, Carolyn Dimitri, Lewrene Glaser, Charles Handy, Mark Jekanowski, Phil Kaufman, Barry Krissoff, Gary Thompson, and Suzanne Thornsby. *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, USDA, ERS, AER-795, January 2001.
- Calvin, Linda, and Veronica Barrios. "Marketing Winter Vegetables from Mexico." In *Vegetables and Specialties Situation and Outlook Report*, USDA, ERS, VGS-274, April 1998, pp. 29-38.
- Calvin, Linda, William Foster, Luis Solorzano, J. Daniel Mooney, Luis Flores, and Veronica Barrios. "Response to a Food Safety Problem in Produce: A Case Study of a Cyclosporiasis Outbreak." In *Global Food Trade and Consumer Demand for Quality*, Barry Krissoff, Mary Bohman, and Julie Caswell, eds., Kluwer Academic/Plenum Publishers, New York, 2002.
- Calvin, Linda. "Cranberry Supply Expands in Response to Higher Demand." In *Agricultural Outlook*. USDA, ERS, AO-246, November 1997.

- Caron, James A. "Shipping Containerized U.S. Agricultural Products to the Philippines," USDA, AMS, August 1, 1999.
- Caron, James A., USDA, AMS. Personal contact, June 19, 2001.
- Chan, T., Dah Chong Hong, LTD. USDA Personal contact, June 22, 2001.
- Commission of the European Communities. *Proposal for a Council Regulation on the CMO in Processed Fruits and Vegetables...* COM(2000)433 Final, Brussels, July 12, 2000.
- Coyle, William, William Hall, and Nicole Ballenger. "Transportation Technology and the Rising Share of U.S. Perishable Food Trade." In *Changing Structure of Global Food Consumption and Trade*. Anita Regmi, ed., USDA, ERS, WRS-01-1, May 2001, pp. 31-40.
- Donovan, Jason, and Barry Krissoff. *Trade Issues Facing U.S. Horticulture in the WTO Negotiations*. ERS Outlook Report No. 285-01, USDA, ERS, August 2001.
- European Commission. *European Agricultural Situation in the European Union, 1999 Report*. Brussels and Luxembourg, 2000.
- FAO. "Compendium of Food Consumption Statistics from Household Surveys in Developing Countries, Vol. 1: Asia," *FAO Economic and Social Development Paper 116/1*, 1993.
- FAO. "Compendium of Food Consumption Statistics from Household Surveys in Developing Countries, Vol. 2: Africa, Latin America and Oceania," *FAO Economic and Social Development Paper 116/2*, 1994.
- Ferris, George, FAS, USDA. Personal contact. November 20, 2000.
- Gibson, Paul, John Wainio, Daniel Whitley, and Mary Bohman. *Profiles of Tariffs in Global Agricultural Markets*, USDA, ERS, AER-796, January, 2001.
- Grethe, Harald, and Stefan Tangermann. *The EU Import Regime for Fresh Fruit and Vegetables after Implementation of the Results of the Uruguay Round*. FAO Economic and Social Department, Gottingen, October 1998a.
- Grethe, Harald, and Stefan Tangermann. *The New Euro-Mediterranean Agreements: An Analysis of Trade Preferences in Agriculture*. Paper prepared for FAO Economic and Social Department. October 1998b.
- Hall, William. "Innovations in Shipping Food Products, Past and Future." In *Technological Changes in the Transportation Sector—Effect on U.S. Food and Agricultural Trade, A Proceedings*. Misc. Pub. No.1566, USDA, ERS, September 2000.
- Handy, Charles, R., Phil R. Kaufman, Kristen Park, and Geoffrey M. Green. "Evolving Marketing Channels Reveal Dynamic U.S. Produce Industry," *Food Review*, Vol. 23, No. 2, USDA, ERS, May-August 2000, pp. 14-20.
- Harris, J. Michael. "Food Product Introductions Continue to Decline in 2000," *Food Review*, Vol. 25, No. 1, USDA, ERS, Spring 2002, pp. 24-27.

- Hasha, Gene. *EU Preferential Trading Agreements: Heightened Competition for U.S., Agricultural Outlook*. USDA, ERS, AGO-287, December 2001.  
<http://www.ers.usda.gov/publications/agoutlook/dec2001/ao287f.pdf>
- Huang, Sophia Wu. "China Increases Exports of Fresh and Frozen Vegetables to Japan," VGS-292-01, USDA, ERS, 2002.  
<http://www.ers.usda.gov/publications/vgs/aug02/vgs292-01/vgs29201.pdf>
- Ito, Kenzo, and John Dyck. *Vegetable Policies in Japan*. USDA, ERS, VGS-234-01, 2002.  
<http://www.ers.usda.gov/publications/vgs/oct02/vgs293-01/vgs293-01.pdf>
- Japan Tariff Association. *Custom Tariff Schedules of Japan, 2002*.  
 \_\_\_\_\_ . *Japan Exports & Imports*. Various years.
- Journal of Commerce*. Various issues.
- Kerr, William. "Dumping—One of Those Economic Myths," *The Estey Centre Journal of International Law and Trade Policy*, Vol. 2, No. 2, 2001, pp. 211-20.
- Martin, Elisa, and Harry deGorter. "The Agreement on Agriculture and the CAP: The Reform of the Fruit and Vegetable Common Market Organization." Paper presented at the International Agricultural Trade Research Consortium. St. Petersburg Beach, FL, December 13-15, 1998.
- Michigan Law Review*. "Applying Anti-dumping Law to Perishable Agricultural Goods," Vol. 80, 1982, pp. 524-61.
- Ministry of Agriculture, Forestry, and Fisheries, Japan (MAFF). *Statistical Yearbook*, various editions.
- Nagata, A. *Vegetable Agriculture in Japan*. Printed briefing, 1997.
- National Agricultural Statistics Service (NASS), USDA. *Agricultural Statistics, 2002*.
- National Bureau of Statistics of China. *China Statistical Yearbook, 2002*.
- Ng, Louis, Louis Ng & Associates, Shanghai, China. Personal contact, July 2, 2001.
- Official Journal of the European Communities*. Council Regulation 2699/2000, L 311/9, December 12, 2000.
- Organization for Economic Co-operation and Development (OECD). *Agricultural reform and its impact on the fruit and vegetable sector in OECD countries*. Paris, 1995.
- Pollack, Susan, and Linda Calvin. *U.S.-Mexico Fruit and Vegetable Trade, 1970-92*. USDA, ERS. AER-704, April 1995.
- Regmi, Anita, and John Dyck, "Effects of Urbanization on Global Food Demand," in *Changing Structure of Global Food Consumption and Trade*, Anita Regmi, ed., Agriculture and Trade Report WRS01-1, USDA, ERS, May 2001.



- Regmi, Anita, M.S. Deepak, James L. Seale, and Jason Bernstein. "Cross-Country Analysis of Food Consumption Patterns," in *Changing Structure of Global Food Consumption and Trade*, Anita Regmi, ed., Agriculture and Trade Report WRS-01-1, USDA, ERS, May 2001.
- Regmi, Anita. "Increased Use of Anti-dumping Weakens Global Trade Liberalization." Paper presented at the Global Agricultural Trade in the New Millennium conference, May 25-26, 2000, New Orleans, LA.
- Shields, Dennis, and Francis Tuan. "China's Fruit & Vegetable Sector in a Changing Market Environment," *Agricultural Outlook*, USDA, ERS, June-July 2001, pp. 10-13.
- Tangermann, Stefan. *Access to European Union Markets for Agricultural Products after the Uruguay Round, and Export Interests of the Mediterranean Countries*. Study prepared for UNCTAD, INT/93/A34, April 1997.
- Tanino, Akira. "Vegetables in Japan; Changes in the Past 30 Years and the Present Situation," *Abstract of Statistics on Vegetables*. Tokyo: Vegetable Supply Stabilization Fund, 1995, pp. 38-39.
- Tarrats Gavidia, Guillermo. "La Central de Abasto de la Ciudad de Mexico: Redes de Frio y Modernizacion," *Enlace*, Mexico City, Vol. 2, no. 7, 1997, p. 3.
- The World Bank. *China—Fruit and Vegetable Marketing Performance*. Report No. 15658, East Asia and Pacific Regional Office, November 6, 1996.
- The World Bank, *World Development Indicators*, 2001.
- Tropp, Debra, David Skully, John Link, and Jaime Malaga. *Mexico's Changing Marketing System for Fresh Produce: Emerging Markets, Practices, Trends, and Issues*. USDA, AMS, October 2002.  
<http://www.ers.usda.gov/Briefing/NAFTA/PDFFiles/mexfreshprod.pdf>
- United Nations Food and Agriculture Organization, Faostat database.  
<http://apps.fao.org/>
- U.S. Department of Agriculture (USDA), Economic Research Service (ERS). Agricultural Market Access Database.
- U.S. Department of Agriculture (USDA), Economic Research Service (ERS). Agricultural Marketing Service (AMS). PIERS data, June 21, 2001.
- U.S. Department of Agriculture (USDA), Economic Research Service (ERS). *Effects of North American Free Trade Agreement on Agriculture and the Rural Economy*. WRS-02-1, July 2002.  
<http://www.ers.usda.gov/publications/wrs0201/>
- U.S. Department of Agriculture (USDA), Economic Research Service (ERS). *Fruit and Tree Nuts, Situation and Outlook Yearbook*. FTS-2003, July 2003.
- U.S. Department of Agriculture (USDA), Economic Research Service (ERS). *Fruit and Tree Nuts*. FTS-292, September 2001.

U.S. Department of Agriculture (USDA), Economic Research Service (ERS). *Vegetables and Melons, Situation and Outlook*. VGS-2003, July 2003.

U.S. Department of Agriculture (USDA) Foreign Agricultural Service (FAS) GAIN reports cited here are available online at <http://www.fas.usda.gov/scripts/w/attacherep/default.asp>. Search under Attache Reports and by report number:

FAS, GAIN Report # CH9630, 1999.

FAS, GAIN Report # CH0618, 2000a.

FAS, GAIN Report # CH0622, 2000c.

FAS, GAIN Report # CH1622, 2001b.

FAS, GAIN Report # CH1628, 2001c.

FAS, GAIN Report #E21046, 2001.

FAS, GAIN Report #HK0074, 2000b.

FAS, GAIN Report #JA9022, 1999.

FAS, GAIN Report # JA1005, 2001a.

FAS, GAIN Report #JA1049, 2001.

Other USDA/FAS sources cited in the text are:

FAS GATS. Global Agricultural Trade System, using data from the United Nations Statistical Office. (GATS is for USDA internal use only.)

FAS. *WTO Tariff Schedules* (2002). Obtained online at: [http://www.fas.usda.gov/scripts/w/wtopdf/wtopdf\\_frm.asp](http://www.fas.usda.gov/scripts/w/wtopdf/wtopdf_frm.asp). Search for Uruguay Round Agreement tariff schedules according to country or chapter.

World Trade Organization. *Notification of the European Communities, Committee on Agriculture, G/AG/N/EEC/16*, March 22, 1999.

World Trade Organization. *Notification of the European Communities, Committee on Agriculture, G/AG/N/EEC/26*. June 21, 2000.