Industry & Trade Summary

Certain Fresh Deciduous Fruits

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PREFACE

In 1991 the United States International Trade Commission initiated its current Industry and Trade Summary series of informational reports on the thousands of products imported into and exported from the United States. Each summary addresses a different commodity/industry area and contains information on product uses, U.S. and foreign producers, and customs treatment. Also included is an analysis of the basic factors affecting trends in consumption, production, and trade of the commodity, as well as those bearing on the competitiveness of U.S. industries in domestic and foreign markets.[1]

This report on *Certain Fresh Deciduous Fruits* covers the period 1989 through 1993 and represents one of approximately 250 to 300 individual reports to be produced in this series during the first half of the 1990s. Listed below are the individual summary reports published to date on the agricultural and forest products sector.

USITC Publication number	*Publication date*	*Title*
2459	November 1991	Live Sheep and Meat of Sheep
2462	November 1991	Cigarettes
2477	January 1992	Dairy Produce
2478	January 1992	Oilseeds
2511	March 1992	Live Swine and Fresh, Chilled, or Frozen Pork
2520	June 1992	Poultry
2524	August 1992	Fresh or Frozen Fish
2545	November 1992	Natural Sweeteners
2551	November 1992	Newsprint
2612	March 1993	Wood Pulp and Waste Paper
2615	March 1993	Citrus Fruit
2625	April 1993	Live Cattle and Fresh, Chilled, or Frozen Beef and Veal
2631	May 1993	Animal and Vegetable Fats and Oils
2635	May 1993	Cocoa, Chocolate, and Confectionery
2636	May 1993	Olives
2639	June 1993	Wine and Certain Fermented Beverages
2693	November 1993	Printing and Writing Paper
2726	January 1994	Furskins
2737	March 1994	Cut Flowers
2749	March 1994	Paper Boxes and Bags
2762	April 1994	Coffee and Tea
2865	April 1995	Malt Beverages
2859	May 1995	Seeds
2875	May 1995	Certain Fresh Deciduous Fruits

[1] The information and analysis provided in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under statutory authority covering the same or similar subject matter.

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INTRODUCTION

This summary presents information on the structure of the U.S. and foreign fresh deciduous fruit industries, domestic and foreign tariffs and nontariff measures, and on the competitiveness of U.S. fresh deciduous fruit producers in both domestic and foreign markets. The scope of this summary covers all of the leading domestic fresh deciduous fruits, including fresh apples, peaches, nectarines, pears, quinces, cherries, plums (including prune plums and sloes), and apricots, whether for fresh-market use or for processing. Statistics and analysis of the competitive position of fresh-market fruits are highlighted separately in this report. Fresh grapes and berries and prepared or preserved fruits are covered in separate summaries.

Fresh apples are the most important product imported, accounting for 48 percent of the total value of imports in 1993 (table 1), followed by pears, 22 percent, and peaches, 18 percent. Plums and sloes, cherries, and apricots make up the remainder.

U.S. fresh deciduous fruit shipments increased from $1.5 billion in 1989, to $1.9 billion in 1993 (table 2). Sixty percent by value of these shipments consisted of apples, and 19 percent of peaches and nectarines. The remaining fresh deciduous fruits accounted for the remainder. Figure 1 shows U.S. production of apples relative to world production. U.S. producers of the fresh deciduous fruits covered in this summary supply most of the domestic consumption of such fruit.

The United States has experienced substantial increases in exports of fresh deciduous fruits for more than a decade. Exports increased substantially since 1986,[1] when the more favorable dollar enhanced U.S. competitiveness in foreign markets. Additional factors contributing to these increases were lower U.S. prices (particularly for apples), increased promotional activities abroad, and lower apple production in Western Europe. During 1989-93, U.S. exports of fresh deciduous fruits rose from $302 million to $596 million—an increase of 97 percent (table 3). As a share of the value of U.S. exports of fresh deciduous fruits during 1989-93, apples averaged 49 percent; cherries, 17 percent; plums and sloes, 12 percent; and pears, peaches, and apricots averaged 11, 10, and 1 percent, respectively.

[1] Exports of fresh deciduous fruits amounted to $181 million in 1986 and $212 million in 1987, up from $154 million in 1985.

Table 1
Certain fresh deciduous fruits: U.S. imports for consumption, 1989–93

(1,000 dollars)

Item	1989	1990	1991	1992	1993
Apples	46,633	40,252	47,734	77,673	70,270
Pears and quinces	22,776	22,303	28,273	32,100	32,299
Peaches	29,299	33,858	33,386	33,758	26,575
Apricots	882	903	930	1,545	1,063
Plums and sloes	13,403	14,670	15,100	15,720	14,160
Cherries	1,918	1,804	1,626	2,470	1,806
Total	114,911	113,790	127,049	163,266	146,173

Source: Compiled from official statistics of the U.S. Department of Commerce.

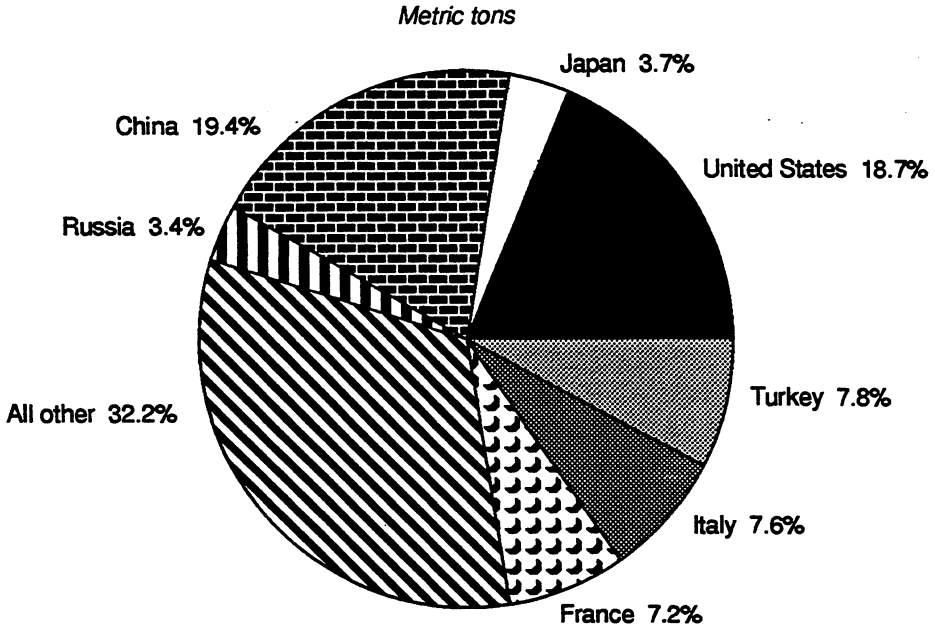
Table 2
Certain fresh deciduous fruits: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Producers' shipments[1]	Exports	Imports	Apparent consumption	Ratio of imports to consumption
	Value *(1,000 dollars)*				*Percent*
1989	1,514,814	301,860	114,912	1,327,866	8.7
1990	1,935,543	476,534	113,790	1,572,799	7.2
1991	2,106,294	516,705	127,050	1,716,639	7.4
1992	1,802,360	606,722	163,267	1,358,905	12.0
1993	1,879,313	595,832	146,174	1,429,655	10.2

[1] Estimated by the staff of the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Figure 1
Apples: Commercial world production, by principal suppliers, 1993[1]



[1] World commercial production 1993/94 25,605,165 metric tons.

Source: World Horticulture Trade and U.S. Export Opportunities, USDA, FAS, Circular Series FHORT 3-94, March 1994, pp. 21-22.

Production Processes

The growing of deciduous tree fruit is a long-term operation. Depending on the type and variety planted, the first harvest is from 3 years to 15 years after planting the trees. The selection of a variety that is well-suited for growing in a particular area and for which there will be a market several years in the future is a challenge for the deciduous tree fruit grower.

The planting of an orchard involves careful planning.[2] Some varieties of deciduous tree fruits are self-pollinating and self-fruitful.[3] Others require pollen from another variety (cross pollination) to bear fruit.

Commercially, all apples are considered self-unfruitful and are interplanted with a pollinator variety. Sweet cherry varieties, pears, and plums, except Stanley plums, are also self-unfruitful, requiring a pollinator variety for good crop sets. But apricots and tart cherries are self-fruitful. Peaches and nectarine varieties are also self-fruitful (with a few exceptions). The selection of a good pollinator variety and a proper planting plan are essential for best production of deciduous tree fruit. Pollinator varieties should be vigorous pollen producers and blossom at the same time as the variety to be pollinated. Deciduous tree fruit must be propagated vegetatively, as tree seedlings always vary from the mother parent. Propagation is accomplished by grafting or budding the desired variety to a botanically related compatible rootstock. Different rootstocks vary greatly in the vigor and growth characteristics imparted to the scion[4] variety.

The establishment of an orchard is capital-intensive, with per acre costs ranging up to

[2] Most of the information used in this section is adapted from Stark Bro's Nurseries and Orchards Co., *Fruit Tree Catalog & Guide for the Professional Grower,* Louisiana, Missouri, and from Norman F. Childers, *Modern Fruit Science,* Rutgers University, 1978.

[3] Pollination is the transfer of pollen from the anther to the stigma. If the transfer is from anther to stigma on the same flower or to the stigma of another flower of the same variety, the variety is self-pollinating. If this self-pollination results in fruit growth to maturity, the variety is self-fruitful. Some varieties do not have stamens or pollen, or cannot pollinate or fertilize their own flowers because of sexual incompatibility. These varieties are self-sterile or self-unfruitful, and require pollen from another variety to bear fruit.

[4] A scion is a branch or part of a branch with at least one bud used in grafting.

Table 3
Certain fresh deciduous fruits: U.S. exports of domestic merchandise, 1989-93

(1,000 dollars)

Item	1989	1990	1991	1992	1993
Apples	133,959	213,358	262,846	323,096	304,799
Pears	34,431	61,473	60,790	62,563	66,782
Peaches	25,533	54,236	60,160	58,192	56,964
Apricots	3,413	4,880	5,423	5,999	6,718
Plums and sloes	38,819	74,034	63,341	52,116	50,481
Cherries	65,705	68,553	64,145	104,757	111,087
Total	301,860	476,534	516,705	606,722	595,832

Source: Compiled from official statistics of the U.S. Department of Commerce.

$10,000 per acre. Major expenses include the costs of trees and irrigation equipment and the labor involved in laying out the orchard and in planting and pruning trees. Once the orchard is established, production of deciduous tree fruit becomes labor intensive, with peak labor requirements for pruning (during the winter months), spraying (throughout the growing season), and particularly for harvesting the fruit (in the fall). In preparation for marketing, the harvested fruit then undergoes sorting and processing (figure 2).

Deciduous fruit trees bear their annual crops best in temperate zone climates, in both the Northern and Southern Hemispheres, where late springs are frost free and winter dormancy requirements are adequately met. Production of fresh deciduous fruits in the United States depends on the rate of tree plantings and removals and on the management and horticultural practices used. The density of tree plantings of apple, pear, and stone fruit trees varies from 70 to more than 1,200 trees per acre, depending on the type of tree-planting method selected by the individual grower. The current trend favors higher density plantings of so-called "dwarf trees" which produce fruit that is larger, has a better color, and is easier to harvest. Dwarf trees differ from the larger standard apple trees in that they begin bearing fruit within 3 to 4 years, as opposed to 7 to 10 years for standard trees. With the dwarf trees, the grower can plant over 1,200 trees per acre, as opposed to the average of only 84 standard trees per acre. Although a dwarf tree will not yield as many fruits as a standard tree, an acre of dwarf trees will yield more fruits than an acre of standard trees. Further, dwarf trees yield a greater proportion of higher quality fruit while facilitating spraying, pruning, and picking operations. Finally, dwarf trees and their branches are much shorter in length than standard trees, and the picker can usually reach the fruit without a ladder.

Products

Apples

Apples (Malus sylvestris) are grown in temperate areas in both the Northern and Southern Hemispheres. There are over 1,800 named varieties of apples[5] with a wide variety of characteristics (such as, color, shape, maturity, and storage life) and uses. There are perhaps 35 varieties that are grown commercially in the United States.

There are three generally accepted classes of apple varieties—(1) dessert apples—those best suited for out-of-hand eating (for instance, Red Delicious, McIntosh, and Granny Smith); (2) cooking apples—those best suited for applesauce, pies, and other apple products (York and Northern Spy); and (3) dual-purpose apples—those suitable both for eating fresh and for cooking (Golden Delicious and Rome).

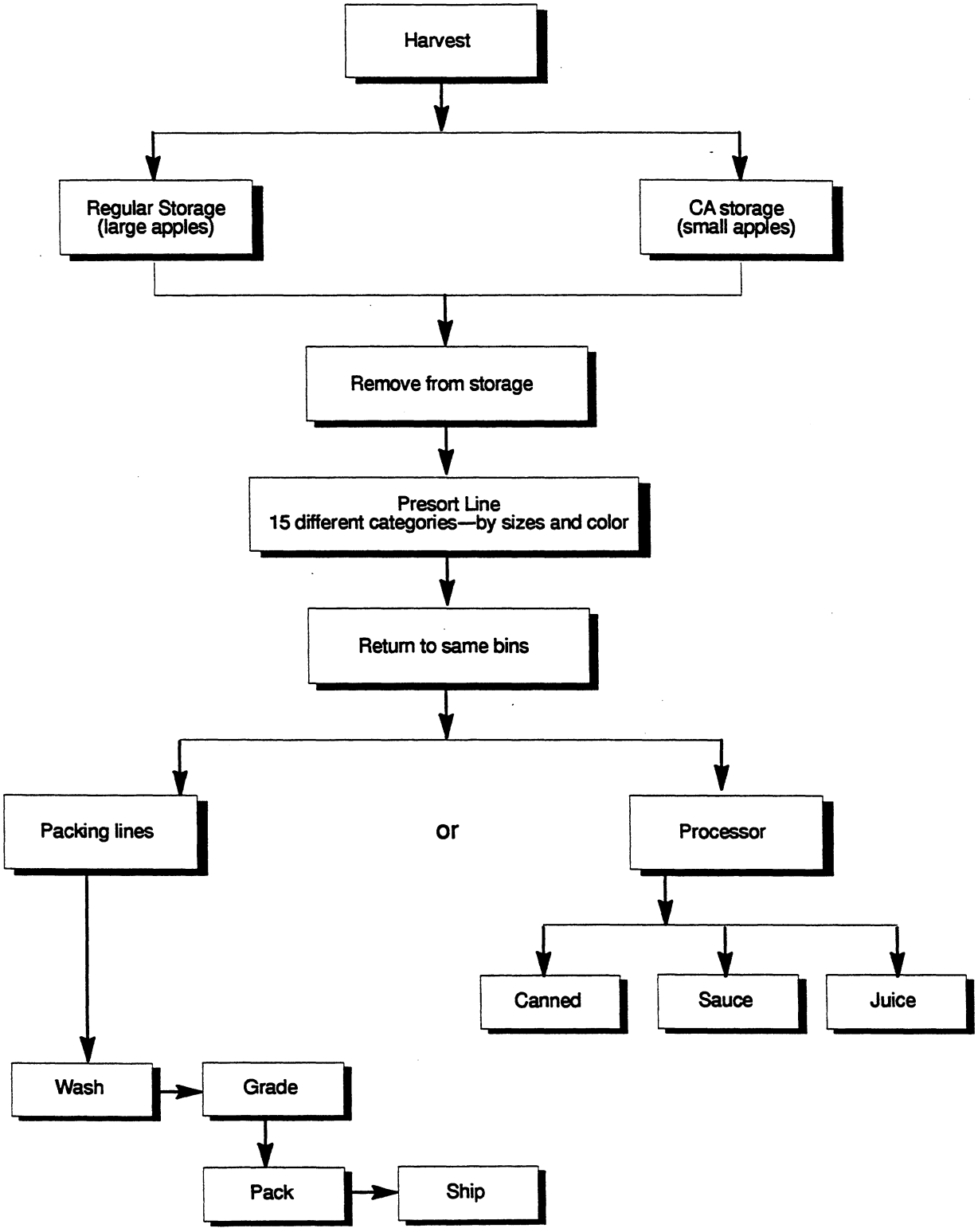
Storage of apples is necessary to ensure their availability and orderly marketing throughout the year. Regular cold storage in refrigerated rooms provides temporary storage in which apples remain in good condition for up to 120 days. Controlled atmosphere (CA) storage, in refrigerated hermetically-sealed rooms in which the oxygen level is reduced from the normal 20.5 percent to about 1 percent, provides for long-term storage in which apples remain in good condition for up to 1 year. During 1989-93, 57 percent of the utilized U.S. apple crop was used fresh, and 43 percent was processed primarily into juice (52 percent of processed use), canned slices or applesauce (33 percent), and frozen or dried products or vinegar (15 percent).

Pears

Pears (Pyrus communis) may be grouped into three classes—summer pears, winter pears, and oriental types. Summer pears, dominated by the Bartlett variety, are marketed in the summer and fall months and have a relatively short storage life (1 or 2 months); they are also the principal processing pear. The Williams pear, grown in other major pear-producing countries, is equivalent to the Bartlett variety. Winter pears, including such varieties as Anjou, Bosc, and

[5] R. M. Smock and A. M. Neubert, *Apples and Apple Products* (New York, NY: Interscience Publishers Inc., 1950), p. 9.

Figure 2
Certain fresh deciduous fruits: Preparation for market



Source: Rice Fruit Company, Inc., Biglerville, PA.

Comice, are capable of relatively long storage periods and are marketed in the fall, winter, and spring months; nearly all are used for fresh market. Oriental-type pears include some varieties with apple-like characteristics with regard to shape and crispness and are considered specialty fruits for fresh-market use. Half of the pears used in the United States during 1989-93 were consumed fresh, and the other half were processed; three fourths of the Bartlett pears were processed.

Apricots, Peaches, Nectarines, Plums, Prune Plums, and Sloes

All these fruits belong to the botanic genus *Prunus* and share in common a relatively thin skin and soft flesh when ripe, and a single hard pit or stone in the center; they are often referred to as "stone" fruit. Peaches are the most important fruit in terms of value, accounting for about 60 percent of U.S. output of these stone fruits. These fruits are produced on winter-hardy, deciduous trees that blossom in early spring. The early blossom habit makes the fruit-set susceptible to damage from late spring frosts, sometimes causing wide year-to-year fluctuations in output. Peaches for fresh market are made up of a large number of varieties of various sizes and maturity dates, including fruit which is yellow fleshed or white fleshed, freestone or clingstone, and fuzzy or smooth skinned. Nectarines are a smooth-skinned type of fruit, similar to peaches, which, for tariff purposes, is classified under the provisions for peaches. The term "plum" in a generic sense covers all plums, prunes, and sloes; however, certain varieties of plums that are relatively firm-fleshed are commonly referred to as prunes. The soft-fleshed plums, or Japanese types, are nearly all used for fresh market, and the firm-fleshed types are mostly processed into dried fruit.[6] Sloes (or prunelles) are small yellow plums, but there has been no known domestic production or trade in recent years. The fresh stone fruits covered here are used chiefly for eating out of hand or in fresh-fruit dessert dishes. Lesser quantities are processed by home consumers into canned or frozen fruit or into jams and preserves.[7] The following shares of average production for the 5-year period were sold for fresh-market use: nectarines (99 percent), peaches (46 percent), apricots (20 percent), and plums, prunes, and sloes (6 percent).[8]

[6] Prune-type plums when dried become the product known by many people simply as prunes.

[7] The HTS provisions for fresh apricots, peaches, and nectarines also include brined apricots, peaches, and nectarines. Such brined fruit, if commercially produced, would likely be used in the production of jams and preserves.

[8] Economic Research Service, U.S. Department of Agriculture, *Fruit and Tree Nuts Situation and Outlook Report*, FTS-271, Sept. 1994.

Cherries

Cherries are generally divided into two broad categories: sweet cherry varieties and tart cherry varieties. About half of the sweet cherries marketed in the United States in 1989-93 were used in fresh form, with the remainder used in various processed forms. Nearly all (97 percent in 1989-93) of the tart cherries marketed in the United States were processed into canned or frozen forms. Fresh cherries are a highly seasonal product with a very short shelf life.

U.S. INDUSTRY PROFILE

Industry Structure

Deciduous fruit growers may deliver their fruit to a cooperative or private packinghouse, sell orchard-run fruit to a cash buyer, or market their own fruit (figure 3). To market fruit through a cooperative, the grower must belong to the cooperative organization. Some cooperatives specialize in handling fruit for processing and others specialize in fresh-market sales. Fruit growers may also sell their orchard-run fruit to cash buyers on the spot market; this is often the method of marketing fruit for processing, such as juice apples. The third marketing option is the do-it-yourself method whereby the grower invests in a packinghouse, storage facilities, and packing equipment. In the United States, there are over 1,200 packinghouses that handle and market fresh apples alone.[9] Some of these packinghouses pack their own products exclusively, others pack their own and others' products, while still others are owned by cooperatives. The Standard Industrial Classification category applicable to this industry is SIC 0175, Deciduous Tree Fruits.

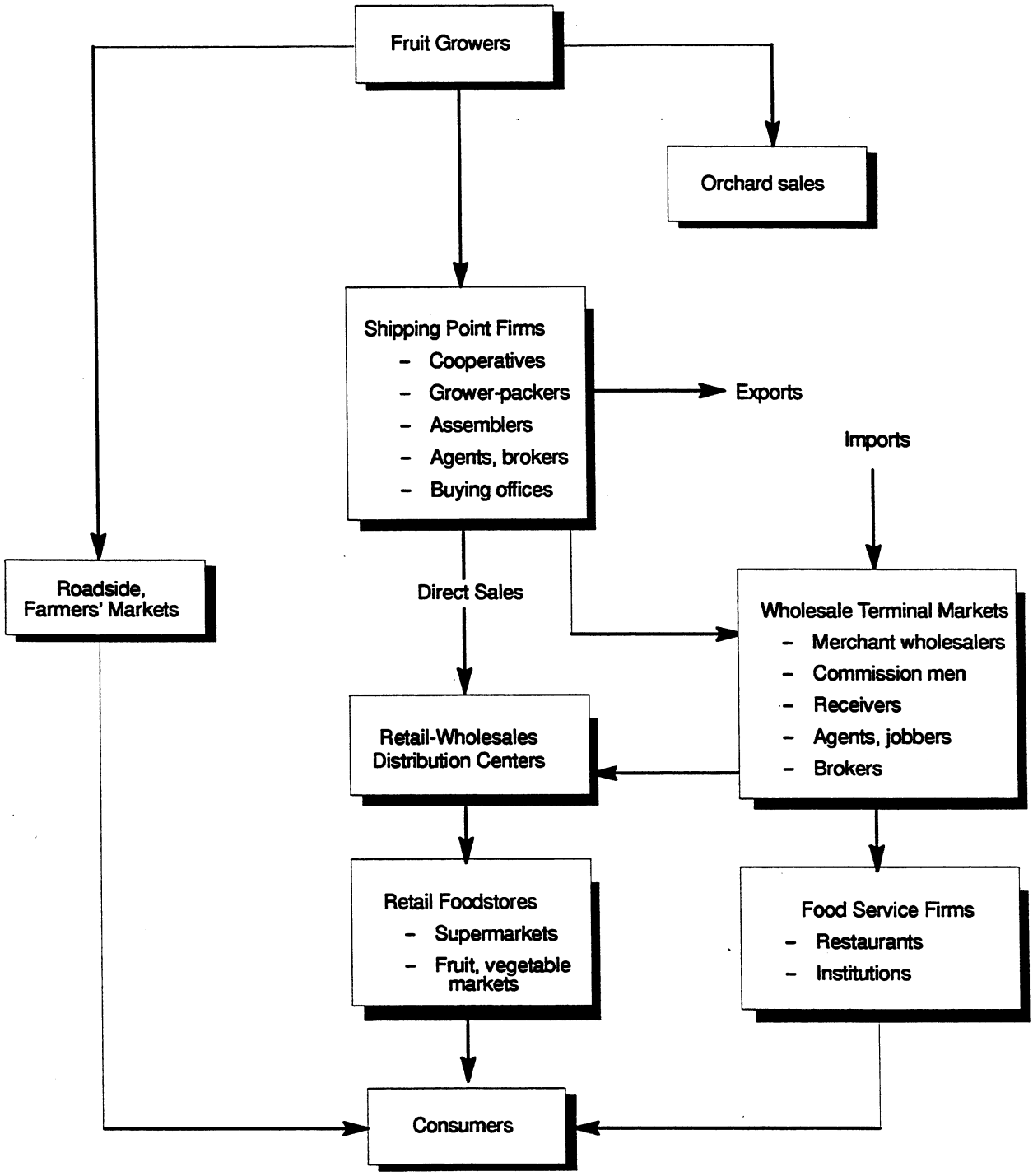
Number of Farms, Acres, Producers, Concentration Among Farms, and Geographic Distribution

Apples and pears are produced in virtually every State in the United States. They are grown on more than 650,000 acres by nearly 40,000 farms growing apples and over 10,000 farms growing pears. Most farms that grow pears also produce apples. However, for many of them, pears are more important than apples as a source of income. The U.S. commercial crop of apples is produced in 36 States with Washington, California, New York, Michigan, Pennsylvania, and Ohio accounting for 83 percent of the production in 1993. Ninety-six percent of the reported pear crop is produced in Washington, California, and Oregon, while six other States, including New York and Pennsylvania, account for the remainder.[10]

[9] U.S. International Trade Commission (USITC), *Apples: Certain Conditions of Competition Between the U.S. and Canadian Industries*, USITC publication No. 2408, Aug. 1991, pp. 2-5.

[10] National Agricultural Statistics Service and Economic Research Service, USDA.

Figure 3
Major distribution channels for certain fresh deciduous fruits



Source: U.S. International Trade Commission staff.

The producers of fresh stone fruits are growers who own or manage the orchards. Some farms grow several or all of these fruits; others may specialize heavily, or exclusively, in only one of the fruits. According to the Bureau of the Census, there are about 21,000 farms that grow peaches; 9,000 farms that grow plums and prunes; 3,300 farms that grow apricots; and 2,300 farms that grow nectarines. The fresh stone fruit crops are produced on about 450,000 acres, nearly 55 percent of which are dedicated to peaches; 34 percent to plums and prunes;[11] 7 percent to nectarines; and 5 percent to apricots.

Peaches are also grown in almost every State. California is normally the leading supplier of fresh-market peaches (33 percent in 1993), followed by South Carolina (about 13 percent).[12] Fresh-market prunes are produced chiefly in Washington, Michigan, and Oregon. California accounts for virtually all U.S. production of apricots, nectarines, and soft plums.

Cherries are grown on about 11,000 farms nationwide. Fresh-market cherries shipped by grower-shippers or specialized packing firms are probably sold by more than 100 such firms. In a typical year, over 60 percent of the sweet cherry output is located in the Pacific Northwest; 19 percent in California; 15 percent in Michigan; and the remaining 4 percent in other States. Generally, over 70 percent of the tart cherry output is in Michigan, and most of the remainder is in Utah and in New York.

Marketing and Pricing

The U.S. fresh deciduous fruit market is typical of many agricultural markets in its highly competitive structure. There are hundreds of buyers and thousands of sellers dealing in interchangeable, largely homogeneous, and perishable products. Individual growers are too small and numerous to influence market prices significantly. For these fresh-fruit producers, marketing is not complex—they simply deliver their fruit to buyers at prevailing market prices or deliver to cooperatives that perform marketing services. Futures contracts, crop switching, and other management options available to producers of grains and other crops are generally not available to tree-crop growers. Although many fresh-fruit growers have organized into cooperatives to, among other things, boost their bargaining power vis-a-vis the more concentrated processing and distribution sectors, no cooperatives or growers are large enough to exert significant influence over grower-level prices. Particularly in the Eastern and Central regions, growers or their cooperatives have some ability to shift their fruits between the fresh market and the various processed-fruit markets as relative prices dictate.[13] Another marketing option available particularly to apple growers, either individually or through their cooperatives, is to withhold supplies (at the risk of spoilage and the expense of storage) with the hope of higher prices in the future.

In the United States, the function of marketing a commercial fresh-fruit crop is much the same throughout the country. In areas that concentrate on the fresh market, sales normally are by the grower/packer. These sales occur at the field, at the grower's privately owned packinghouse, or at grower-owned cooperatives. Sales may also be made through a broker on a commercial basis. At the retail level, an estimated 75 to 80 percent of domestic fresh-market sales are made through supermarket chain stores. The remainder are sold through smaller retail outlets, institutional sales, roadside stands, and farmers' markets.

Quality of U.S. Fresh Deciduous Fruit

Product quality, availability, and orderly marketing are key factors in successful marketing of fresh deciduous fruits. Therefore, most fresh fruits are sold at harvest. The remaining fruits go to the processed market, bringing significantly lower prices for the grower. The major exception is apples—significant quantities of apples are placed in storage for marketing throughout the year. With expanded export markets in mind, U.S. apple producers began replacing standard-sized apple trees with dwarf and semidwarf trees during the late 1970s and early 1980s as the former were taken out of rotation. In conjunction with the increase in plantings, CA storage facilities were also increased. U.S. industry sources indicate that the quality of U.S. fresh-market apples available for sale both in the United States and in foreign markets has been high and has become even higher in recent years primarily because of the increased capacity in CA storage initiated at that time. These increases in plantings and CA storage have resulted in the availability of high-quality domestic apples throughout the year.

U.S. Government Programs

Although no Federal programs or any kind of price support or deficiency payments exist specifically for fresh deciduous fruits, a number of Federal- and State-supported programs benefit fruit producers. There are also a number of Federal and State

[11] Nearly all planted in prunes for drying.

[12] Figures for New Jersey and Pennsylvania are included in "Other States in 1992-93" to avoid disclosure of individual operations.

[13] Because orchards in the Western region are geared exclusively to the fresh market, this option is not as significant.

Government agencies that administer programs of a nonfinancial nature, such as research and development programs. Since most of these programs are not product specific, fruits are not the only commodity they benefit.

Under the Market Promotion Program (MPP),[14] the USDA is authorized to use Commodity Credit Corporation[15] funds or commodities to encourage the development, maintenance, and expansion of commercial export markets to eligible trade organizations that implement a foreign market development program.[16] The following tabulation shows funds allocated at the beginning of fiscal year (September 1) under the TEA/MPP to be used by the Washington State Apple Commission and under the MPP to be used by the International Apple Institute in international promotions (in millions of dollars):[17]

Fiscal year beginning Sept. 1—

	Allocated				
	1989 TEA	1990 TEA	1991 MPP	1992 MPP	1993 MPP
Washington State Apple Commission	2.85	3.8	4.34	4.41	3.91
International Apple Institute	—	—	—	—	.91

The MPP also provides funds for international promotions for plums, peaches, nectarines, fresh prunes, and Bartlett pears under the California Tree Fruit Agreement; for fresh pears by the Oregon-Washington-California Pear Bureau; and for fresh cherries by the Northwest Cherry Growers.

The USDA provides a guarantee of private credit used to finance the export sales of certain eligible agricultural products, including fresh deciduous fruit. The Export Credit Guarantee Program (GSM-102), which has been in operation since 1980, guarantees repayment of short-term loans (6 months to 3 years) made to eligible countries that purchase U.S. farm products. Such credit guarantees in fiscal year 1994 applied to sales of apples, pears, plums, peaches, and nectarines to Mexico and apples, pears, plums, cherries, and peaches to Venezuela.[18]

The sale of all fresh and frozen fruit into interstate and foreign commerce is covered under the Perishable Agricultural Commodities Act of 1930 (PACA).[19] PACA is administered by the USDA's Agricultural Marketing Service. Its purpose is to protect buyers and sellers, including foreign sellers, of perishable items from unfair and fraudulent trade practices, and to enforce marketing contracts so that sellers, including foreign sellers, are paid promptly.[20] All brokers, commission merchants, shippers, growers' agents, and dealers (including jobbers, truckers, wholesalers, and retailers) who trade in large quantities at a wholesale level must be licensed and must observe all rules of fair trade under PACA.

Domestic growers must comply with the marketing, storage, and use regulations for pesticide materials, as issued by the Environmental Protection Agency. They are required to manage carefully the application of pesticides and to keep accurate records of usage in order to protect against illegal pesticide residues on fruits offered for sale.

State-marketing orders currently exist in most of the leading apple-producing areas.[21] Growers pay into the marketing program on the basis of the amount of apples they sell. These fees are then used for advertising, promotion, public relations, and merchandising. These State-marketing orders cannot have quantitative controls.

In addition to apples, marketing orders are in place for grade, size, pack, and container for pears, peaches, and nectarines in California; peaches, apricots, and sweet cherries in Washington; and fresh prunes in Washington and Oregon. Marketing orders for grade and size are in place for winter pears in Oregon, Washington, and California; Bartlett pears in Washington and Oregon; and peaches in Georgia.

Purchases of fresh deciduous fruits are also made by the U.S. Government to supply various Government-funded feeding programs. Although the same fresh fruits may not be purchased every year, most of the fruits in this summary are included at one time or another. These programs include school feeding programs, Soup Kitchen Services, Nutritional Program for the Elderly, Food Distribution on the Indian Reservations, and Summer Food Services Programs (summer schools and camps).

[14] Under the Food, Agriculture, Conservation, and Trade Act of 1990, the Target Export Assistance (TEA) program, initiated under the Food Security Act of 1985, was replaced by the Market Promotion Program.

[15] Commodity Credit Corporation is a quasi-governmental corporation of the U.S. Department of Agriculture.

[16] 7 U.S.C. 5623(a).

[17] Horticultural and Tropical Products Division, Foreign Agricultural Service, USDA.

[18] *World Horticultural Trade & U.S. Export Opportunities,* Foreign Agricultural Service, USDA, Sept. 1994, p. 9.

[19] (7 U.S.C. 499a).

[20] *Agricultural Marketing Handbook for Caribbean Basin Products,* USDA, Nov. 1991, pp. 32-33.

[21] Washington, Michigan, New York, the New England States, Pennsylvania, Virginia, West Virginia, North Carolina, Utah, Ohio, Idaho, and Maryland.

Consumer Characteristics and Factors Affecting Demand

Price, quality, consumer preferences, other substitute fresh fruits, niche markets, and CA are all factors that affect demand. Because of increased plantings in the late 1970s and early 1980s, U.S. apple growers expanded their CA storage capacity to accommodate the anticipated volume for year-round domestic and export marketing. This investment coupled with the development of niche markets (increased plantings of new and exotic varieties and promotion of those varieties) led to the marketing of U.S. apples year round.

Virtually all (98 percent) of the nectarines produced in the United States in 1993 went to the fresh market; 57 percent of the apples, 54 percent of the pears, 50 percent of the sweet cherries, 47 percent of the peaches, and only 2 percent of the tart cherries were so marketed. Most of the plums and prunes produced in California are processed, while about 55 percent of those produced in other States are consumed fresh. In areas that concentrate on the fresh market, sales normally are by the grower/packer. These sales occur at the field, at the grower's privately owned packinghouse, or at grower-owned cooperatives. Sales may also be through a broker on a commercial basis. At the retail level, an estimated 75 to 80 percent of domestic fresh-market sales are made through supermarket chain stores. The remaining are made through smaller retail outlets, institutional sales, roadside stands, and farmer's markets.

FOREIGN INDUSTRY PROFILE

Fresh deciduous fruits are produced in virtually every country that has a temperate climate. Of the fruits discussed, apples are the principal fresh fruit produced and traded worldwide. Most of the other fruits are traded principally in processed forms. World production of apples in the 1992/93 marketing year amounted to 31.7 million metric tons. China is the world's largest producer of apples, with 1992/93 production amounting to 6.6 million metric tons. The United States is the next largest producer (4.8 million metric tons), followed by Germany (3.0 million metric tons), France and Italy (2.4 million metric tons), and Turkey (2.1 million metric tons) (table 4). The European Union, a leader in world apple trade, accounted for one-third of the world's apple output in 1992/93. Western Europe is also the leader in the transition to high-density plantings of dwarf apple trees, accompanied by labor-intensive staking and pruning systems that are designed to optimize production and profitability over a 10-year period. Most of the high-density Western European apple orchards are in small orchards (10 hectares or less) that produce a high percentage of premium quality fruit for the fresh market. Northern Hemisphere countries accounted for 79 percent of world production and exports in that year. China, the world's largest producer, exported less than 1 percent of its apple production in 1992/93, compared with 47 percent for New Zealand and 38 percent for Chile.

U.S. TRADE MEASURES

Tariff Measures

All the fresh deciduous fruits included in this summary are provided for in chapter 8 of the *Harmonized Tariff Schedule of the United States*. The 1994 rates of duty applicable to the articles included in this summary are shown in table 5. Also shown are the levels to which the United States has agreed to reduce its duties under the GATT Uruguay Round of Trade Negotiations. An explanation of tariff and trade agreement terms is provided in appendix A. Almost 80 percent of fresh fruit imports—mostly apples—enter the United States duty free.

Nontariff Measures

The Plant Quarantine Act of 1912 (7 U.S.C. 159) authorizes the Secretary of Agriculture to issue regulations restricting the importation of plant products that may result in the entry into the United States of injurious plant diseases or insect pests. Quarantine regulations relating to fruits and vegetables are set forth in 7 CFR 319.56. They require that importers obtain permission to enter fresh or frozen fruit into the United States. These regulations are administered by the Animal and Plant Health Inspection Service (APHIS) of the USDA. In addition, every shipment is subject to inspection at the port of entry.[22] When a particular crop of a producer country is host to an unwanted pest, permission for entry is denied unless an acceptable treatment program has been established. APHIS administers similar programs for domestically produced fruits. The United States does not inspect for injurious plant pests if the shipment is certified by authorized regulatory officials as being pest free.

In addition, the Food and Drug Administration (FDA) administers the Federal Food, Drug, and Cosmetic Act (FFDCA) to protect the public from food contamination, including contamination from exposure to illegal pesticide residues in imported and domestic food. Under its pesticide monitoring program, FDA collects and analyzes samples of shipments of imported and domestic food to determine whether illegal residues are present.

[22] Excluding entries from Canada.

Table 4
Apples, fresh: Production and trade in specified countries, 1992/93

Region and country	Production	Exports		Imports
		Quantity	Ratio of exports to production	
	1,000 metric tons		Percent	1,000 metric tons
Northern Hemisphere:				
United States	4,798	489	10	110
Canada	545	74	14	97
Total	5,343	563	24	207
European Union:				
France	2,398	649	27	73
Germany	2,951	63	21	892
Italy	2,368	384	16	35
Spain	1,027	23	2	102
Other	1,832	357	19	801
Total	10,576	1,476	14	1,903
Russia	1,210	0	0	30
China	6,556	41	1	1
Japan	1,039	2	(1)	(2)
Taiwan	13	0	0	115
Turkey	2,100	46	2	0
All other	1,813	218	12	234
Total	12,731	307	2	380
Southern Hemisphere:				
Argentina	800	110	14	0
Australia	340	34	10	0
Chile	850	327	38	0
New Zealand	489	232	47	1
South Africa	597	210	35	0
Total	3,076	913	30	1
World total	31,726	3,258	10	2,491

[1] Less than 0.5 percent.
[2] Less than 500 metric tons.

Source: Compiled from official statistics of the U.S. Department of Agriculture.

U.S. Government Trade-Related Investigations

In November 1990, at the request of the Committee on Finance, U.S. Senate, the U.S International Trade Commission instituted Investigation No. 332-305, *Apples: Certain Conditions of Competition Between the U.S. and Canadian Industries,* USITC Publication No. 2408, Aug. 1991, for the purpose of providing information on the competitive factors affecting both the U.S. and Canadian apple markets. Results of the investigation were published in August 1991.

FOREIGN TRADE MEASURES

Tariff Measures

Tariff barriers to world trade in both developed and undeveloped countries have traditionally been of concern to U.S. exporters of fresh deciduous fruit. The U.S. agriculture industry lobbied aggressively for many years for tariff cuts in Mexico and the Pacific Rim. A standard 20-percent tariff now applies to almost all fruits entering Mexico; this tariff is being phased out for U.S. fruits entering Mexico, pursuant to

Table 5
Certain fresh deciduous fruits: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1994; final staged Uruguay Round rate; U.S. exports, 1993; U.S. imports, 1993

HTS subheading	Brief Description	Col. 1 rate of duty as of Jan. 1, 1994		Final staged Uruguay Round[2]	U.S. exports, 1993	U.S. imports, 1993
		General	Special[1]			
					1,000 dollars	
	Apples pears and quinces, fresh:					
0808.10.00	Apples	Free			304,799	70,270
	Pears and quinces:					
0808.20.20	If entered during the period from April 1 to June 30, inclusive, in any year	Free			65,782	12,771
0808.20.40	If entered at any other time	1.1¢/kg	Free (E,IL,J,MX) 0.4¢/kg (CA)	0.3¢/kg	([3])	19,528
	Apricots, cherries, peaches (including nectarines), plums (including prune plums) and sloes, fresh:					
0809.10.00	Apricots	0.4¢/kg	Free (E,IL,J,MX) 0.1¢/kg (CA)	0.2¢/kg	6,718	1,063
0809.20.00	Cherries	Free				
	Sweet varieties				110,485	1,802
	Tart varieties				602	4
	Peaches, including nectarines:					
0809.30.20	If entered during the period from June 1 to November 30, inclusive, in any year	0.4¢/kg	Free (E,IL,J,MX) 0.1¢/kg (CA)	0.2¢/kg	56,964	622
0809.30.40	If entered at any other time	Free			([4])	25,953
	Plums (including prune plums) and sloes:					
0809.40.20	If entered during the period from January 1 to May 31, inclusive in any year	Free			50,481	13,248
0809.40.40	If entered at any other time	1.1¢/kg	Free (E,IL,J,MX) 0.4¢/kg (CA)	0.5¢/kg	([5])	912

[1] Programs under which special tariff treatment may be provided and the corresponding symbols for such programs as they are indicated in the "Special" subcolumn are as follows: Generalized System of Preferences (A or A*); Automotive Products Trade Act (B); Agreement on Trade in Civil Aircraft (C); North American Free-Trade Agreement: goods from Canada (CA) and goods from Mexico (MX); Caribbean Basin Economic Recovery Act (E or E*); United States-Israel Free-Trade Area (IL); and Andean Trade Preference Act (J or J*).

[2] Uruguay Round bound rates of duty are published by the Office of the U.S. Trade Representative, Results of the Uruguay Round Market Access Negotiations, GATT Schedule XX, United States of America, Vol. 1, General Notes, Agriculture (Washington, DC.; GPO, Apr. 1994). The rates shown are the negotiated rates which will be implemented in stages through the year 2000.

[3] Included with 0808.20.20.

[4] Included with 0809.30.20.

[5] Included with 0809.40.20.

Source: U.S. exports and imports compiled from data of the U.S. Department of Commerce. *Harmonized Tariff Schedule of the United States (1994)*, supps. 1 and 2.

the North American Free Trade Agreement. Mexico significantly reduced its tariffs and officially eliminated import licenses for most fruits after acceding to the GATT in 1987. Canada has various rates of duty on fresh fruit imports from the United States. These rates will be reduced over time to free under the terms of the Canada-United States Free Trade Agreement. During 1989-93, U.S. fresh fruit exports to Indonesia increased, in terms of value, by almost a hundredfold; exports to Mexico increased nearly 300 percent; and those to Thailand, Taiwan, Japan (excluding apples), and Hong Kong, increased 160 percent, 112 percent, 87 percent, and 62 percent, respectively. Fresh apples enter Hong Kong duty free.

Nontariff Measures

Many countries of the world control imports of fresh deciduous products by additional import-related taxes or surcharges that often are accompanied by standards, testing, and certification requirements. Other countries impose variable levies, licensing, and health and sanitary requirements. Japan and China are two that impose such requirements. Phytosanitary restrictions on codling moth and fire blight have effectively excluded U.S. fresh apples from both markets for many years. Beginning with the 1993/94 harvest, U.S. fresh apples from Washington State entered China for the first time. An agreement finalized on June 10, 1994, between the USDA and China's Administration for Animal and Plant Quarantine finalized regulations for the export of Washington State apples to China. The agreement allows designated orchards and packers (who agree to specified requirements for trapping, inspecting, and monitoring insects) to export Red Delicious and Golden Delicious apples to approved Chinese companies authorized by the central government to handle import business.[23] U.S. apples began to enter the Japanese market in early 1995, after Japan's Ministry of Agriculture, Forestry and Fisheries removed a phytosanitary ban on August 19, 1994, and Japanese quarantine inspectors began visiting Washington State orchards and packing houses as the first step toward approving shipments of apples to Japan.[24]

Presently, Mexico's phytosanitary regulations prohibit imports of fresh apples from the United States except from Washington, Oregon, and Idaho. Sanidad Vegetal, the Mexican plant health agency, is expected to approve the importation of apples in the 1994/95 season from Colorado, Michigan, New York, Pennsylvania, Utah, Virginia, and West Virginia.[25]

U.S. MARKET

Consumption

U.S. apparent consumption for all the fresh-market deciduous fruits covered by this summary increased irregularly by 8 percent during this period to $1.4 billion (table 2). This is a continuation of a long-term increase in consumption of fresh fruit on the part of more health-conscious consumers. Part of the increased consumption has been at the expense of canned fruit. The most significant increases were in pears and quinces and in plums and sloes. Consumption of cherries and apricots remained relatively constant during 1989-93. According to industry sources, these increases also reflect favorable exchange rates, industry marketing efforts, and increased demand for fresh deciduous fruits year round. Most of the imports of fresh fruit enter from the Southern Hemisphere countries during the winter months when the U.S. does not produce fruit. Such imports tend to be complimentary trade rather than in competition with U.S. production.

Consumption of fresh apples, which accounted for about 65 percent of total consumption of fresh deciduous fruit in 1989-93, ranged irregularly from 2.2 million metric tons to 2.5 million metric tons during this period.[26] Domestic production supplied about 95 percent of the consumption. Consumption of fresh peaches and nectarines averaged about 685,000 metric tons annually in 1989-93, or about 19 percent of the consumption of fresh deciduous fruits included herein; domestic production supplied about 93 percent of the consumption.

Consumption of pears and quinces averaged about 374,000 metric tons annually during 1989-93 (or about 10 percent of total consumption of fresh deciduous fruits), with domestic production supplying about 88 percent of the consumption. Consumption of fresh plums and prunes averaged about 173,000 metric tons annually during 1989-93 (5 percent of total U.S. consumption of fresh deciduous fruits), with domestic production supplying 80 percent of the consumption. Consumption of fresh sweet cherries averaged about 50,000 metric tons annually during 1989-93 (4 percent of total U.S. consumption of fresh deciduous fruits), with domestic production supplying 70 percent of the consumption. Consumption of fresh tart cherries and fresh apricots were very small, representing less than 0.5 percent of consumption each of fresh deciduous fruits, with domestic production supplying virtually all of the consumption of both fruits.

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[23] *World Horticultural Trade & U.S. Export Opportunities*, Sept. 1994, pp. 10-12.

[24] *American Fruit Grower*, Dec. 1994, pp. 12-13, and *The Washington Post*, Jan. 10, 1995.

[25] *World Horticultural Trade & U.S. Export Opportunities*, Sept. 1994, p. 7.

[26] Tables B-1 through B-7 in Appendix B.

Production

Total U.S. production of fresh deciduous fruits for fresh market use rose irregularly from 3.9 million metric tons to 4.2 million metric tons during 1989-93. The value of such production increased irregularly from $1.5 billion in 1989 to $1.9 billion in 1993 (table 6). Total U.S. production of apples, which accounted for about 65 percent of production of fresh deciduous fruits during 1989-93, was characterized by fluctuating upward production, with shifts in varieties produced. Production of Red Delicious, the leading variety, increased 9 percent during 1989-93 (table 7). Production of Golden Delicious, the second leading variety, remained constant. Production of several traditional varieties (e.g., Jonathan, Winesap, and Northern Spy) declined, while that of other new varieties (e.g., Granny Smith, Idared, Gala, and Fuji) increased. The production of most other fresh deciduous fruit for fresh-market use fluctuated upward irregularly during 1989-93, with weather conditions having a major influence on production.

U.S. Imports

With the exception of peaches and cherries, the value of U.S. fresh deciduous fruit imports increased almost consistently during 1989-93 (table 1). Apples, peaches, and pears averaged over 85 percent, by value, of total imports for the 5-year period. Apples represented over 40 percent; peaches, 24 percent; and pears, 21 percent, respectively (table 1). Apples increased over 50 percent, from $47 million in 1989 to $70 million in 1993; pears and quinces increased 42 percent, from $23 million to $32 million, and apricots 21 percent, from $882,000 to $1 million, reflecting the increased demand by U.S. consumers for fresh deciduous fruits.

The leading suppliers for all fresh deciduous fruits were Chile, New Zealand, Canada, Argentina, and the Republic of South Africa (table 8 and figure 4). Four suppliers, including three Southern Hemisphere countries, with harvest seasons opposite those in the United States, accounted for nearly all of the fresh apple imports. Chile was the leading supplier for the 5-year period of imports of all fresh deciduous fruits except pears; Argentina was the leading supplier of pears. The proportion of fresh fruits in this summary entering the United States duty free is 85 percent.

FOREIGN MARKETS

Foreign Market Profile

Western Europe is the world's largest market for fresh deciduous fruit; however, as a major producer, demand for imported fruit is low. The Pacific Rim countries offer the greatest growth potential for U.S. fresh deciduous fruit exports. In many of these markets, fresh deciduous fruits are high-priced specialty or delicacy articles. With reductions in tariffs on these fruits, Taiwan, Korea, and Japan could emerge

Table 6
Certain fresh deciduous fruits: U.S. production, by products, 1989–93

Product	1989	1990	1991	1992	1993
	Quantity (*1,000 kilograms*)				
Apples	2,660,456	2,517,892	2,480,697	2,622,217	2,794,537
Peaches	480,626	423,519	559,143	499,995	533,515
Pears	412,062	423,619	419,664	403,679	461,485
Cherries	96,942	66,270	62,169	90,555	74,761
Nectarines	198,673	208,199	191,416	211,374	182,344
Plums	216,590	224,347	209,551	245,902	180,793
Apricots	14,288	21,537	18,271	21,047	19,423
Total	4,079,637	3,885,383	3,940,911	4,094,769	4,246,858
	Value (*1,000 dollars*)				
Apples	817,061	1,161,890	1,374,748	1,125,360	1,123,076
Peaches	245,345	246,871	260,435	235,113	260,276
Pears	152,606	168,212	177,959	168,028	142,295
Cherries	98,796	94,052	88,307	118,239	137,673
Nectarines	87,645	109,999	86,457	73,710	102,421
Plums	102,710	140,489	102,239	68,152	96,915
Apricots	10,651	14,030	16,149	13,758	16,657
Total	1,514,814	1,935,543	2,106,294	1,802,360	1,879,313

Note.—Fresh-market fruit only, excluding fruit for processing.

Source: U.S. Department of Agriculture, NASS, *Noncitrus Fruits and Nuts Summaries*, July 1991, 1992, and 1993.

Table 7
Apples: U.S. production, by varieties and by regions, 1989-94

(1,000 42-lb. units)

Variety and region	1989	1990	1991	1992	1993	August Est. 1994
Red Delicious:						
East	10,400	11,850	15,350	16,133	14,950	13,125
Central	7,280	4,400	5,590	6,870	7,512	6,080
West	86,400	85,100	77,220	83,356	88,241	94,181
Total	104,080	101,350	98,160	106,359	110,703	113,386
Golden Delicious:						
East	5,650	7,050	8,190	9,008	9,303	7,557
Central	3,870	2,800	2,895	3,660	3,268	3,516
West	27,650	26,700	22,690	25,702	24,291	25,117
Total	37,170	36,550	33,776	38,370	36,862	36,190
McIntosh:						
East	10,650	11,000	10,990	12,190	9,328	9,788
Central	4,130	3,650	4,050	4,620	3,668	2,982
Total	14,780	14,650	15,040	16,810	12,996	12,770
Granny Smith:						
West, total	15,250	15,550	15,650	16,628	17,097	17,467
Rome:						
East	6,870	7,200	7,490	7,939	7,411	7,540
Central	2,240	2,000	2,520	3,340	3,660	3,161
West	4,150	4,000	3,600	3,913	4,601	5,091
Total	13,260	13,200	13,610	15,192	15,672	15,792
Jonathan:						
East	780	770	1,000	760	691	630
Central	6,070	5,700	6,370	6,930	6,169	4,946
West	1,740	1,700	1,400	1,470	1,023	962
Total	8,590	8,170	8,770	9,160	7,883	6,538
York:						
East, total	5,620	5,550	6,900	6,722	6,508	6,106
Stayman:						
East	3,230	3,400	4,000	3,632	3,407	1,963
Central	980	700	800	570	597	400
Total	4,210	4,100	4,800	4,202	4,004	2,363
Cortland:						
East	1,770	1,860	1,860	2,220	1,798	2,081
Central	420	360	440	490	388	191
Total	2,190	2,220	2,300	2,710	2,186	2,272
R.I. Greening:						
East	2,530	1,960	2,300	3,190	2,610	3,100
Central	490	360	440	500	351	165
Total	3,020	2,320	2,740	3,690	2,961	3,265
Newtown:						
West, total	4,350	4,300	3,800	4,470	4,297	4,116

See footnotes at end of table.

Table 7—*Continued*
Apples: U.S. production, by varieties and by regions, 1989-94

(1,000 42-lb. units)

Variety and region	1989	1990	1991	1992	1993	August Est. 1994
Winesap:						
East	810	810	1,200	1,106	821	881
Central	700	500	570	660	934	874
West	2,120	2,000	2,000	1,720	904	700
Total	3,630	3,310	3,770	3,486	2,659	2,455
Idared:						
East	1,700	1,800	1,900	1,970	1,602	1,748
Central	2,160	1,760	2,230	3,090	2,909	2,606
Total	3,860	3,560	4,130	5,060	4,511	4,354
Northern Spy:						
East	620	600	700	420	394	715
Central	2,010	1,400	1,930	1,920	1,660	1,231
Total	2,630	2,000	2,630	2,340	2,054	1,946
Gravenstein:						
West, total	2,140	2,200	2,000	2,180	1,470	1,314
Empire:						
East	1,300	1,950	2,500	2,680	2,306	2,269
Central	450	400	550	560	1,195	1,055
Total	1,750	2,350	3,050	3,240	3,501	3,324
Gala:						
West, total	(1)	(1)	(1)	(1)	4,344	5,748
Fuji:						
West, total	(1)	(1)	(1)	(1)	4,764	8,413
All others:						
East	4,319	3,701	4,344	4,437	4,046	3,827
Central	3,535	3,183	2,,875	3,432	3,433	2,642
West	2,826	2,712	3,291	3,381	2,492	3,391
Total	10,680	9,596	10,510	11,250	9,971	9,860
Total U.S.	237,210	230,976	231,635	251,869	254,443	257,679

[1] Not applicable. Prior to 1993, production was not broken out individually for Gala and Fuji apples.

Note.—Sum of varieties may not add to total due to rounding.

Source: International Apple Institute.

as significant markets. Indonesia eliminated its import ban on apples in 1991, and, with the opening of China's market in early 1994 and the opening of Japan's market to apples in August 1994, the Pacific rim is expected to become an even larger export market in the future.

Other potential markets for U.S. fresh deciduous fruit exports are Canada and Mexico. All tariffs on fresh deciduous fruits imported into Canada and Mexico from the United States are scheduled to be eliminated under the North American Free Trade Agreement.

Adverse weather conditions in other countries have been a major factor affecting exports of U.S. fresh deciduous fruits. This has been especially true, in the past, with the European Union.

U.S. Exports

Products Exported

U.S. exports of fresh deciduous fruits have primarily consisted of fresh apples and cherries, which accounted for 70 percent of total U.S. exports of fresh deciduous fruit in 1993. For the 5-year period covered, apples accounted for 49 percent (by value); cherries,

Table 8
Certain fresh deciduous fruits: U.S. imports for consumption, by principal sources, 1989–93

Source	1989	1990	1991	1992	1993
	Quantity (*1,000 kilograms*)				
Chile	113,078	119,635	127,444	142,864	135,614
New Zealand	24,003	27,967	20,513	33,975	31,822
Canada	49,086	55,510	73,417	47,197	43,341
Argentina	27,488	17,277	14,819	22,168	15,552
Republic of South Africa	0	0	0	10,545	11,130
Brazil	0	17	45	315	4,785
Korea, South	933	840	1,155	830	1,160
Japan	2,464	1,271	1,088	977	711
Australia	2,043	2,255	2,859	2,603	767
Mexico	281	44	183	198	118
All other	2,907	177	856	190	305
Total	222,283	224,991	242,379	261,862	245,304
	Value (*1,000 dollars*)				
Chile	58,996	64,028	67,007	74,605	66,557
New Zealand	17,991	17,452	18,343	39,560	34,560
Canada	15,372	18,132	23,696	19,872	16,676
Argentina	10,068	7,123	8,626	14,362	9,861
Republic of South Africa	0	0	0	6,622	8,939
Brazil	0	6	18	242	3,178
Korea, South	1,937	1,810	2,237	1,655	2,832
Japan	5,828	3,157	3,239	3,057	2,331
Australia	2,214	1,863	3,078	2,778	709
Mexico	219	44	411	283	208
All other	2,287	175	394	231	322
Total	114,912	113,790	127,050	163,267	146,174
	Unit value (*per kilogram*)				
Chile	$0.52	$0.54	$0.53	$0.52	$0.49
New Zealand	0.75	0.62	0.89	1.16	1.09
Canada	0.31	0.33	0.32	0.42	0.38
Argentina	0.37	0.41	0.58	0.65	0.63
Republic of South Africa	0	0	0	0.63	0.80
Brazil	0	0.35	0.40	0.77	0.66
Korea, South	2.08	2.16	1.94	1.99	2.44
Japan	2.37	2.48	2.98	3.13	3.28
Australia	1.08	0.83	1.08	1.07	0.92
Mexico	0.78	1.00	2.25	1.43	1.77
All other	0.79	0.99	0.46	1.22	1.06
Total	0.52	0.51	0.52	0.62	0.60

Source: Compiled from official statistics of the U.S. Department of Commerce.

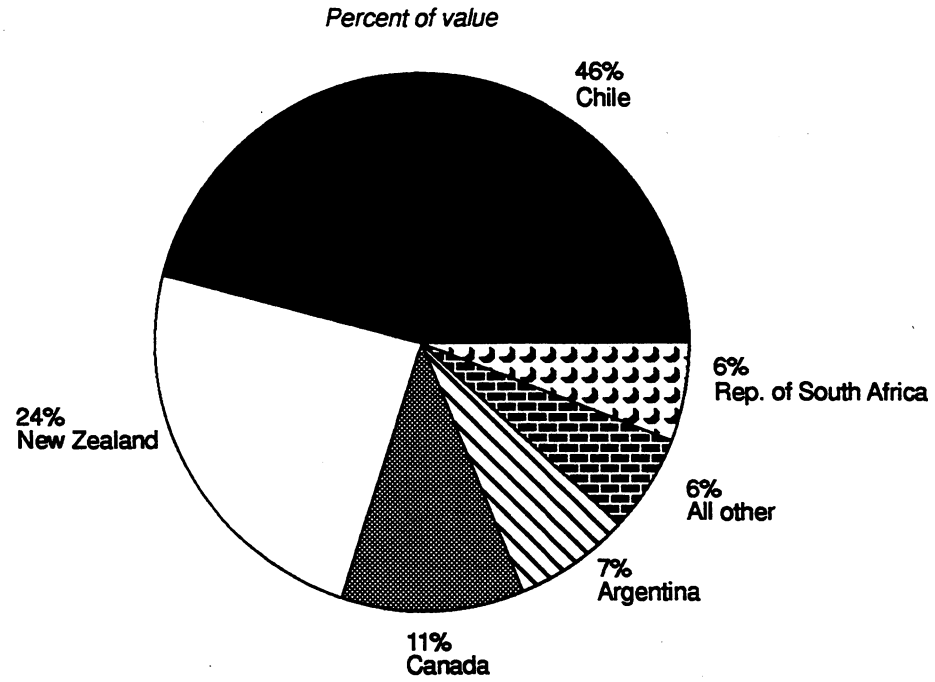
17 percent; and plums and sloes, 12 percent of total U.S. exports of fresh deciduous fruits. Other leading fresh deciduous fruit exports were pears and quinces, 11 percent; peaches, 10 percent; and apricots, 1 percent (figure 5).

Canada was the traditional export market for most fresh deciduous fruits except for sweet cherries. This changed in 1992, when Taiwan replaced Canada as the leading export market for fresh apples. Japan historically has been the leading market for U.S. exports of sweet cherries.

Export Levels and Trends

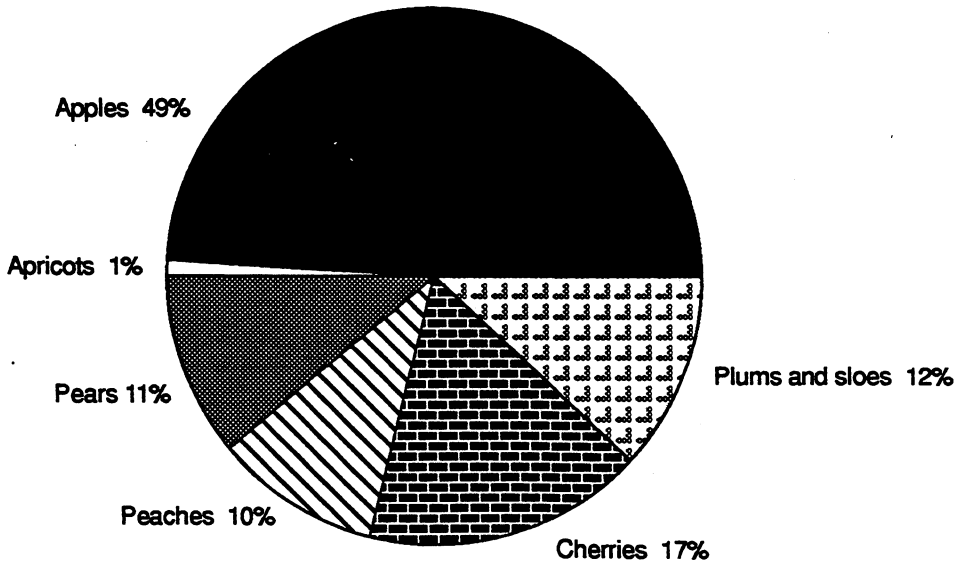
During 1989-93, an average of 27 percent of the value of U.S. production of fresh deciduous fruits was exported (table 2). In terms of value, exports rose from $302 million in 1989 to $596 million in 1993, or by 97 percent (table 2). The gains have been mainly in apples, cherries, and pears.

Figure 4
Certain fresh deciduous fruits: U.S. imports, by principal sources, 1993



Source: Compiled from official statistics of the U.S. Department of Commerce.

Figure 5
Certain fresh deciduous fruits: U.S. exports of domestic merchandise, 1989-93



Source: Compiled from official statistics of the U.S. Department of Agriculture, NASS, Noncitrus Fruits and Nuts 1993 Summary July 1994, and from U.S. International Trade Commission Staff.

In 1993, Canada, Taiwan, Mexico, Japan, and Hong Kong together accounted for nearly 80 percent of total U.S. fresh fruit exports, by value (figure 6 and table 9). Canada was the leading export market, accounting for 28 percent of all U.S. exports of fresh deciduous fruit in 1993.

U.S. exports to Canada more than doubled from 1989 to 1990, reflecting in part the implementation of the United States-Canada Free-Trade Agreement, which entered into force on January 1, 1989, and in part more accurate counting of imports and exports.[27]

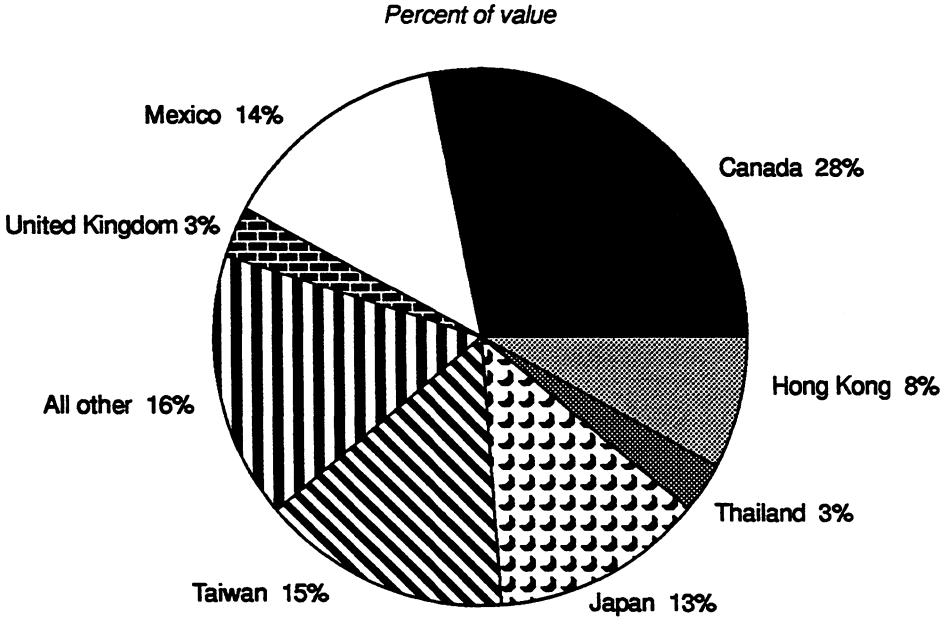
Factors regarded as having contributed to the substantial increases in other export markets were 1) the lowering of tariffs and the increase in per capita income in Mexico; 2) the expansion of the TEA program (now the MPP) to include allocations for marketing purposes; 3) the lowering of tariffs in the Pacific Rim countries; and 4) the depreciation of the U.S. dollar against many other currencies.

U.S. TRADE BALANCE

The United States has enjoyed a positive trade balance for fresh deciduous fruits for over a decade. This surplus reflects the continued demand for fresh deciduous fruit year round, ongoing concerns with good health, the lowering of tariffs in both Mexico and the Pacific Rim, the U.S. industry's reputation for supplying high-quality fruit, and increased CA storage for apples in the United States, thus enabling year round availability of quality fruit. Between 1989 and 1993, the positive trade balance increased nearly 150 percent, from $187 million to $450 million (table 10). Chile and New Zealand were the only countries with which the U.S. had a negative trade balance.

[27] It should be noted that beginning in 1990, U.S. exports to Canada as reported by the Bureau of the Census are derived from import data compiled by Canada. Census officials advised the Commission staff that pre-1990 exports to Canada (e.g., 1989) were likely understated by varying degrees depending upon product area.

Figure 6
Certain fresh deciduous fruits: U.S. exports, by principal markets, 1993



Note.—Because of rounding, figures may not add to 100 percent.

Source: U.S. exports compiled from data of the U.S. Department of Commerce.

Table 9
Certain fresh deciduous fruits: U.S. exports of domestic merchandise, by principal markets, 1989–93

Market	1989	1990	1991	1992	1993
	Quantity (*1,000 kilograms*)				
Canada	136,275	200,149	187,927	201,484	198,095
Taiwan	73,849	105,796	93,203	159,306	115,358
Mexico	43,917	51,866	70,788	117,945	157,886
Japan	12,292	8,391	6,991	12,489	12,961
Hong Kong	45,479	50,281	59,536	62,776	65,292
Thailand	11,788	17,220	16,130	17,388	26,163
United Kingdom	27,247	42,205	54,536	50,132	22,483
Saudi Arabia	17,248	26,902	25,477	15,233	22,509
Indonesia	189	1,946	4,376	10,382	14,292
Singapore	13,074	14,145	17,988	14,354	14,610
All other	92,744	130,567	145,918	125,900	115,884
Total	474,102	649,469	682,871	787,390	765,532
	Value (*1,000 dollars*)				
Canada	78,058	169,070	172,594	171,254	166,788
Taiwan	41,605	70,384	64,296	112,624	88,164
Mexico	21,293	26,707	38,087	56,088	83,751
Japan	41,547	38,650	34,214	62,325	77,742
Hong Kong	28,133	30,521	38,984	43,818	45,593
Thailand	7,347	11,250	12,715	14,624	19,126
United Kingdom	20,139	29,381	38,092	39,040	18,807
Saudi Arabia	8,615	16,232	17,577	7,848	10,912
Indonesia	101	1,426	3,337	8,614	9,816
Singapore	7,792	8,325	10,749	9,347	9,329
All other	47,229	74,588	86,061	81,140	65,804
Total	301,860	476,534	516,705	606,722	595,832
	Unit value (*per kilogram*)				
Canada	$0.57	$0.84	$0.92	$0.85	$0.84
Taiwan	0.56	0.67	0.69	0.71	0.76
Mexico	0.48	0.51	0.54	0.48	0.53
Japan	3.38	4.61	4.89	4.99	6.00
Hong Kong	0.62	0.61	0.65	0.70	0.70
Thailand	0.62	0.65	0.79	0.84	0.73
United Kingdom	0.74	0.70	0.70	0.78	0.84
Saudi Arabia	0.50	0.60	0.69	0.52	0.48
Indonesia	0.54	0.73	0.76	0.83	0.69
Singapore	0.60	1.59	0.60	0.65	0.64
All other	0.51	0.57	0.59	0.64	0.57
Total	0.64	0.73	0.76	0.77	0.78

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 10
Certain fresh deciduous fruits: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1989-93[1]

Market	1989	1990	1991	1992	1993
U.S. exports of domestic merchandise:					
Canada	78	169	173	171	167
Taiwan	42	70	64	113	88
Mexico	21	27	38	56	84
Japan	42	39	34	62	78
Chile	0	0	0	0	0
Hong Kong	28	31	39	44	46
New Zealand	2	0	0	1	0
Thailand	7	11	13	15	19
United Kingdom	20	29	38	39	19
Saudi Arabia	9	16	18	8	11
All other	53	84	100	98	85
Total	302	477	517	607	596
Asean	25	30	38	45	29
European Union	27	44	59	54	51
U.S. imports for consumption:					
Canada	15	18	24	20	17
Taiwan	0	0	0	0	0
Mexico	0	0	0	0	0
Japan	6	3	3	3	2
Chile	59	64	67	75	67
Hong Kong	0	0	0	0	0
New Zealand	18	17	18	40	35
Thailand	0	0	0	0	0
United Kingdom	0	0	0	0	0
Saudi Arabia	0	0	0	0	0
All other	16	11	14	26	26
Total	115	114	127	163	146
Asean	0	0	0	0	0
European Union	2	0	0	0	0
U.S. merchandise trade balance:					
Canada	63	151	149	151	150
Taiwan	42	70	64	113	88
Mexico	21	27	38	56	84
Japan	36	36	31	59	76
Chile	-59	-64	-67	-75	-67
Hong Kong	28	31	39	44	46
New Zealand	-16	-17	-18	-39	-35
Thailand	7	11	13	15	19
United Kingdom	20	29	38	39	19
Saudi Arabia	9	16	18	8	11
All other	37	73	86	72	59
Total	187	363	390	444	450
Asean	25	30	38	45	51
European Union	25	44	59	54	29

[1] Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export.

Note.—The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products. Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

APPENDIX A
EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS

The ***Harmonized Tariff Schedule of the United States*** (HTS) replaced the *Tariff Schedules of the United States* (TSUS) effective January 1, 1989. Chapters 1 through 97 incorporate the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description and have U.S. product subdivisions at the 8-digit level. Chapters 98 and 99 contain special U.S. classifications and temporary rate provisions, respectively

Duty rates in the ***general*** subcolumn of HTS column 1 are most-favored-nation (MFN) rates, many of which have been eliminated or are being reduced as concessions resulting from the Uruguay Round of Multilateral Trade Negotiations. Column 1-general duty rates apply to all countries except those enumerated in HTS general note 3(b) (Afghanistan, Azerbaijan, Cuba, Kampuchea, Laos, North Korea, and Vietnam), which are subject to the rates set forth in column 2. Albania, Armenia, Belarus, Bosnia, Bulgaria, the People's Republic of China, Croatia, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan are accorded MFN treatment. Specified goods from designated MFN-eligible countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the ***special*** subcolumn of HTS column 1 or in the general notes. If eligibility for special tariff rates is not claimed or established, goods are dutiable at column 1-general rates. The HTS does not enumerate those countries as to which a total or partial embargo has been declared.

The ***Generalized System of Preferences*** (GSP) affords nonreciprocal tariff preferences to developing countries to aid their economic development and to diversify and expand their production and exports. The U.S. GSP, enacted in title V of the Trade Act of 1974 for 10 years and extended three times thereafter, applies to merchandise imported on or after January 1, 1976 and before the close of July 30, 1995. Indicated by the symbol "A" or "A*" in the special subcolumn, the GSP provides duty-free entry to eligible articles the product of and imported directly from designated beneficiary developing countries, as set forth in general note 4 to the HTS.

The ***Caribbean Basin Economic Recovery Act*** (CBERA) affords nonreciprocal tariff preferences to developing countries in the Caribbean Basin area to aid their economic development and to diversify and expand their production and exports. The CBERA, enacted in title II of Public Law 98-67, implemented by Presidential Proclamation 5133 of November 30, 1983, and amended by the Customs and Trade Act of 1990, applies to merchandise entered, or withdrawn from warehouse for consumption, on or after January 1, 1984. Indicated by the symbol "E" or "E*" in the special subcolumn, the CBERA provides duty-free entry to eligible articles, and reduced-duty treatment to certain other articles, which are the product of and imported directly from designated countries, as set forth in general note 7 to the HTS.

Free rates of duty in the special subcolumn followed by the symbol "IL" are applicable to products of Israel under the ***United States-Israel Free Trade Area Implementation Act*** of 1985 (IFTA), as provided in general note 8 to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn followed by the symbol "J" or "J*" in parentheses is afforded to eligible articles the product of designated beneficiary countries under the ***Andean Trade Preference Act*** (ATPA), enacted as title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 11 to the HTS.

Preferential or free rates of duty in the special subcolumn followed by the symbol "CA" are applicable to eligible goods of Canada, and those followed by the symbol "MX" are applicable to eligible goods of Mexico, under the ***North American Free Trade Agreement***, as provided in general note 12 to the HTS, implemented effective January 1, 1994 by Presidential Proclamation 6641 of December 15, 1993.

Other special tariff treatment applies to particular ***products of insular possessions*** (general note 3(a)(iv)), goods covered by the ***Automotive Products Trade Act*** (APTA) (general note 5) and the ***Agreement on Trade in Civil Aircraft*** (ATCA) (general note 6), ***articles imported from freely associated states*** (general note 10), ***pharmaceutical products*** (general note 13), and ***intermediate chemicals for dyes*** (general note 14).

The ***General Agreement on Tariffs and Trade 1994*** (GATT 1994), annexed to the Agreement Establishing the World Trade Organization, replaces an earlier agreement (the GATT 1947 [61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786]) as the primary multilateral system of disciplines and

principles governing international trade. Signatories' obligations under both the 1994 and 1947 agreements focus upon most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national (nondiscriminatory) treatment for imported products; the GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, antidumping and countervailing duties, dispute settlement, and other measures. The results of the Uruguay Round of multilateral tariff negotiations are set forth by way of separate schedules of concessions for each participating contracting party, with the U.S. schedule designated as Schedule XX.

Officially known as "The Arrangement Regarding International Trade in Textiles," the ***Multifiber Arrangement*** (MFA) provides a framework for importing and exporting countries to negotiate bilateral agreements limiting textile and apparel shipments, or for importing countries to take unilateral action in the absence or violation of an agreement. These agreements establish quantitative limits on textiles and apparel of cotton, other vegetable fibers, wool, man-made fibers or silk blends in an effort to prevent or limit market disruption in the importing countries—restrictions that would otherwise be a departure from GATT provisions. The United States has bilateral agreements with many supplying countries, including the four largest suppliers: China, Hong Kong, the Republic of Korea, and Taiwan

APPENDIX B
STATISTICAL TABLES

Table B-1
Apples, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity *(1,000 kilograms)*				
1989	2,660,456	268,104	115,622	2,507,974	4.6
1990	2,517,892	379,429	106,146	2,244,609	4.7
1991	2,480,697	414,365	119,770	2,186,102	5.5
1992	2,622,217	507,611	120,409	2,235,015	5.4
1993	2,794,537	505,810	113,950	2,402,677	4.7
	Value *(1,000 dollars)*				
1989	817,061	133,959	46,633	729,735	6.4
1990	1,161,890	213,358	40,252	988,784	4.1
1991	1,374,748	262,846	47,734	1,159,636	4.1
1992	1,125,360	323,096	77,673	879,937	8.8
1993	1,123,076	304,799	70,270	888,547	7.9
	Unit value *(cents per kilogram)*				
1989	31	50	40	29	(2)
1990	46	56	38	44	(2)
1991	55	63	40	53	(2)
1992	43	64	65	39	(2)
1993	40	60	62	37	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-2
Peaches and nectarines, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity *(1,000 kilograms)*				
1989	679,299	45,037	44,122	678,384	6.5
1990	631,718	57,823	51,813	625,708	8.3
1991	750,559	69,531	50,419	731,447	6.9
1992	711,369	70,651	53,700	694,418	7.7
1993	715,859	63,163	41,682	694,378	6.0
	Value *(1,000 dollars)*				
1989	332,990	25,533	29,299	336,756	8.7
1990	356,870	54,236	33,858	336,492	10.1
1991	346,892	60,160	33,386	320,118	10.4
1992	308,823	58,192	33,758	284,389	11.9
1993	362,697	56,964	26,575	332,308	8.0
	Unit value *(cents per kilogram)*				
1989	49	57	66	50	(2)
1990	56	94	65	54	(2)
1991	46	87	66	44	(2)
1992	43	82	63	41	(2)
1993	51	90	64	48	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-3
Pears and quinces, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity (*1,000 kilograms*)				
1989	412,062	74,120	39,053	376,995	10.4
1990	423,619	108,742	40,941	355,818	11.5
1991	419,664	102,302	45,785	363,147	12.6
1992	403,679	105,184	58,853	357,348	16.5
1993	461,485	110,810	64,736	415,411	15.6
	Value (*1,000 dollars*)				
1989	152,606	34,431	22,776	140,951	16.2
1990	168,212	61,473	22,303	129,042	17.3
1991	177,959	60,790	28,273	145,442	19.4
1992	168,028	62,563	32,100	137,565	23.3
1993	142,295	65,782	32,299	108,812	29.7
	Unit value (*cents per kilogram*)				
1989	37	46	58	37	(2)
1990	40	57	54	36	(2)
1991	42	59	62	40	(2)
1992	42	59	55	38	(2)
1993	31	59	50	26	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-4
Plums, prune plums, and sloes, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity (*1,000 kilograms*)				
1989	216,590	56,064	20,677	181,203	11.4
1990	224,347	75,233	23,428	172,542	13.6
1991	209,551	74,077	23,816	159,290	15.0
1992	245,902	68,362	25,340	202,880	12.5
1993	180,793	54,839	22,305	148,259	15.0
	Value (*1,000 dollars*)				
1989	102,710	38,819	13,403	77,294	17.3
1990	140,489	74,034	14,670	81,125	18.1
1991	102,239	63,341	15,100	53,998	28.0
1992	68,152	52,116	15,720	31,756	49.5
1993	96,915	50,481	14,160	60,594	23.4
	Unit value (*cents per kilogram*)				
1989	47	69	65	43	(2)
1990	63	98	63	47	(2)
1991	49	86	63	34	(2)
1992	28	76	62	16	(2)
1993	54	92	63	41	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-5
Cherries, sweet varieties, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity *(1,000 kilograms)*				
1989	93,903	26,579	1,689	69,013	2.4
1990	63,957	22,748	1,404	42,613	3.3
1991	60,491	17,226	1,355	44,620	3.0
1992	86,564	30,641	2,105	58,028	3.6
1993	72,402	25,389	1,610	48,623	3.3
	Value *(1,000 dollars)*				
1989	96,489	65,238	1,821	30,072	5.5
1990	92,098	67,779	1,712	26,031	6.6
1991	86,608	63,355	1,626	24,879	6.5
1992	114,813	104,258	2,394	12,949	18.5
1993	135,575	110,485	1,802	26,892	7.0
	Unit value *(cents per kilogram)*				
1989	$1.03	$2.45	$1.08	48	(2)
1990	1.44	2.98	1.22	61	(2)
1991	1.43	3.68	1.20	56	(2)
1992	1.33	3.40	1.14	22	(2)
1993	1.87	4.35	1.12	53	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-6
Cherries, tart varieties, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity *(1,000 kilograms)*				
1989	3,039	363	308	2,984	10.3
1990	2,313	828	271	1,756	15.4
1991	1,678	487	0	1,191	0
1992	3,991	249	203	3,945	98.8
1993	2,359	305	2	2,056	0.1
	Value *(1,000 dollars)*				
1989	2,307	467	97	1,937	5.0
1990	1,954	774	92	1,272	7.2
1991	1,699	790	0	909	0
1992	3,426	499	76	3,003	2.5
1993	2,098	602	4	1,500	0.3
	Unit value *(cents per kilogram)*				
1989	$0.76	$1.29	$0.31	-	(2)
1990	.84	.93	.34	-	(2)
1991	1.01	1.62	0	-	(2)
1992	.86	2.00	.37	-	(2)
1993	.89	1.97	2.00	-	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.

Table B-7
Apricots, fresh: U.S. production, exports of domestic merchandise, imports for consumption, and apparent consumption, 1989-93

Year	Production[1]	Exports	Imports	Apparent consumption	Ratio *(percent)* of imports to consumption
	Quantity *(1,000 kilograms)*				
1989	14,288	3,835	812	11,265	7.2
1990	21,537	4,666	989	17,860	5.5
1991	18,271	4,883	1,235	14,623	8.4
1992	21,047	4,692	1,252	17,607	7.1
1993	19,423	5,216	1,018	15,225	6.7
	Value *(1,000 dollars)*				
1989	10,651	3,413	882	8,120	10.9
1990	14,030	4,880	903	10,053	9.0
1991	16,149	5,423	930	11,656	8.0
1992	13,758	5,999	1,545	9,304	16.6
1993	16,657	6,718	1,063	11,002	9.7
	Unit value *(cents per kilogram)*				
1989	$0.75	$0.89	$1.09	.72	(2)
1990	.65	1.05	.91	.56	(2)
1991	.88	1.11	.75	.80	(2)
1992	.65	1.28	1.23	.53	(2)
1993	.86	1.29	1.04	.72	(2)

[1] Commercial crop for fresh market use.
[2] Not meaningful.

Source: Production compiled from official statistics of the U.S. Department of Agriculture; exports and imports, compiled from official statistics of the U.S. Department of Commerce.