

Industry & Trade Summary

Edible Nuts

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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 edible nuts covers the period 1994-99. Listed below are the individual summary reports published to date on the agriculture and forest product sectors.

<i>USITC publication number</i>	<i>Publication date</i>	<i>Title</i>
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
2544	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	June 1993	Cocoa, Chocolate, and Confectionery
2636	May 1993	Olives
2639	June 1993	Wine and Certain Fermented Beverages
2693	October 1993	Printing and Writing Paper
2702	November 1993	Fur Goods
2726	January 1994	Furskins
2737	March 1994	Cut Flowers
2749	March 1994	Paper Boxes and Bags
2762	April 1994	Coffee and Tea

¹ The information and analysis provided in this report are for the purposes 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.

PREFACE—*Continued*

<i>USITC publication number</i>	<i>Publication date</i>	<i>Title</i>
2859	May 1995	Seeds
2865	April 1995	Malt Beverages
2875	May 1995	Certain Fresh Deciduous Fruits
2898	June 1995	Certain Miscellaneous Vegetable Substances and Products
2917	October 1995	Lumber, Flooring, and Siding
2918	August 1995	Printed Matter
2928	November 1995	Processed Vegetables
3015	February 1997	Hides, Skins, and Leather
3020	March 1997	Nonalcoholic Beverages
3022	April 1997	Industrial Papers and Paperboards
3080	January 1998	Dairy Products
3083	February 1998	Canned Fish, Except Shellfish
3095	March 1998	Milled Grains, Malts, and Starches
3096	April 1998	Millwork
3145	December 1998	Wool and Related Animal Hair
3148	December 1998	Poultry
3171	March 1999	Dried Fruits Other Than Tropical
3268	December 1999	Eggs
3275	January 2000	Animal Feeds
3350	September 2000	Grain (Cereals)

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ABBREVIATIONS AND ACRONYMS

AVE	Ad valorem equivalent
COMMERCE	U.S. Department of Commerce
CCC	Commodity Credit Corporation of the U.S. Department of Agriculture
ERS	Economic Research Service of the U.S. Department of Agriculture
EU	European Union
FAS	Foreign Agricultural Service of the U.S. Department of Agriculture
FDA	Food and Drug Administration
FMD	Foreign Market Development Cooperator Program of the U.S. Department of Agriculture
GSM-102	Export Credit Guarantee Program
GSM-103	Intermediate Export Credit Guarantee Program
HTS	Harmonized Tariff Schedule of the United States
KG	Kilogram
MAP	Market Access Program of the U.S. Department of Agriculture
MT	Metric ton
NAFTA	North American Free Trade Agreement
NASS	National Agricultural Statistics Service of the U.S. Department of Agriculture
TRQ	Tariff-rate quota
URA	Uruguay Round Agreement
USDA	U.S. Department of Agriculture
USITC	U.S. International Trade Commission

ABSTRACT

This report addresses trade and industry conditions for the edible nut industry for the period 1995-2000.

- Edible nuts include (1) tree nuts used as snack foods or as ingredients in prepared foods); (2) peanuts, a legume that is used in the United States primarily as a snack food or as an ingredient in prepared foods; and (3) watermelon and pumpkin seeds used as snack foods. The major tree nuts produced in the United States and other countries are almonds, hazelnuts, macadamias, pecans, pistachios, and walnuts. Brazil nuts, cashews, coconuts, and coconut meats are not produced in the United States in commercial quantities but are consumed in the United States.
- The United States is the world's-leading producer and exporter of edible tree nuts, the world's third-largest producer of peanuts, and the leading exporter of peanuts. Between marketing years 1995/96 and 1999/00, U.S. production of tree nuts increased from 770 million pounds in 1995/96 to a peak of 1,214 million pounds in 1997/98 and then declined to 849 million pounds in 1998/99. Although the area devoted to edible nut production is increasing, weather and the biennial production habit of many nut trees are the principal reasons for the changes in annual production. Exports of tree nuts followed the same pattern as tree nut production.
- U.S. peanut production increased irregularly during the period 1995/96 to 1999/00, from 3.2 billion pounds to 3.5 billion pounds. Exports of peanuts varied from a high of 824 million pounds in 1995/96 to a low of 561 million pounds in 1998/99.
- The United States maintained a trade surplus in edible nuts during 1999 of \$418 million. Principal export markets were the EU, Canada, Japan, and Mexico. The EU accounted for nearly one-half of U.S. edible nut exports in 1999. India, Brazil, and Mexico are the principal sources of U.S. imports. The United States faces competition in international markets from Argentina (peanuts), Australia (macadamias), China (walnuts), Iran (pistachios), and Turkey (hazelnuts). U.S. tariffs on most edible nuts are low, with almost 70 percent of U.S. imports in 1999 entering free of duty without the benefit of preferential treatment. The aggregate trade-weighted average rate of duty for all products covered in this summary was 0.7 percent ad valorem equivalent in 1999.

ABSTRACT—Continued

- U.S. consumers of edible nuts and nut products include households, restaurants, institutions, and processors and manufacturers of further processed products (such as nut mixers, bakeries, confectioneries, and ice cream manufacturers. At the retail level, changes in consumer incomes and retail prices for edible nuts and nut products relative to other snack foods and other protein sources (meat, poultry, fish) are the principal factors influencing the demand for edible nuts.

INTRODUCTION

This summary discusses key aspects of the global edible nut industry during the period 1995-99. The products included in this summary are edible tree nuts such as almonds, Brazil nuts, cashews, hazelnuts, macadamias, pecans, pistachios, and walnuts. Also included are coconuts, coconut meat, and peanuts. Peanuts, which are a legume, are included in this summary because they are used primarily as an edible nut in the United States. Prepared or preserved watermelon and pumpkin seeds are also included in this summary because they are used as a snack food. Information is presented in this report on the structure of U.S. and foreign edible nut industries, domestic and foreign tariff and nontariff measures, and competitive conditions of the U.S. edible nut industry in domestic and foreign markets.

Edible tree nuts are provided for in chapters 8 and 20 of the *Harmonized Tariff Schedule of the United States (HTS)*. Peanuts are provided for in chapters 12 and 20. Prepared or preserved watermelon seeds and pumpkin seeds are provided for in chapter 20.

The United States has one of the most diverse edible nut markets in the world. U.S. producers' shipments of edible nuts amounted to \$2.5 billion in 1999 up slightly from 1998 but still below the 1997 high of \$3.0 billion. Peanuts were by far the largest component of the domestic edible nut market, accounting for 45 percent of shipments in 1999; almonds accounted for 27 percent; and walnuts accounted for 12 percent. The most significant U.S. imported edible nuts are peanuts and peanut products, primarily peanut butter and peanut paste; cashews; Brazil nuts; hazelnuts; and macadamia nuts.

The U.S. Department of Agriculture (USDA) operates export assistance and credit guarantee programs to assist U.S. exporters of certain edible nuts. Foreign markets purchased 46 percent of U.S. output of edible nuts during 1995-99.

Tree nuts are the edible kernel of seeds of trees. Peanuts are the seeds of an annual legume which grows close to the ground and bears nuts below the surface. Watermelon and pumpkin seeds are obtained from melons. Edible nuts are highly nutritious. They are high in oil, protein, and certain vitamins and minerals. Edible nuts may be used in cooking to add aroma, flavor, texture, or color, or as a garnish. They may be used as a before-meal or between-meal snack, primarily as roasted and salted nuts. They may also be used as butters and pastes in various types of sandwiches or as ingredients in candies and confectionery products. Edible nuts are an essential part of a healthy diet. Small amounts of nuts in the diet have been shown to reduce the risk of heart disease and cholesterol-related health problems.¹ The edible nut industry and the International Nut Council have been promoting the nutritional and health values of edible nuts. These promotional activities have helped expand the demand for edible nuts and absorb the increasing world supplies of nuts.

There are 12 major types of edible tree nuts produced in the world—almonds, Brazil nuts, cashew nuts, chestnuts, coconuts, hazelnuts (filberts), macadamias, pecans, pignolias (pine nuts), pistachios, black walnuts, and English walnuts. The major edible tree nuts produced

¹ The Charlotte Observer, Food Section, *Fatty, yes; but some nuts are good for you*, Jan. 21, 1998. Blue Diamond Growers, *Almond Facts*, vol. 67, No. 3, May/June 1999, pp. 7-9.

in the United States are almonds, hazelnuts, macadamias, pecans, pistachios, black walnuts, and English walnuts.

Tree Nuts

Almonds

Almonds are the nuts of a deciduous tree grown in the semiarid regions of the Mediterranean, the Middle East, and California. There are two main types of almonds: sweet and bitter. Most sweet almonds are marketed as shelled nuts. A small portion is marketed in the shell (in-shell) generally for household consumption. Shelled almonds are used domestically by confectioners, grocers (for resale), salters and food processors, and bakers and ice cream makers. Almonds have been used in increasingly important quantities in snack foods, breakfast cereals, prepared food mixes, and frozen foods in recent years. Bitter almonds are not consumed as edible nuts because of their toxicity, but can be used to make flavoring extracts and certain pharmaceuticals.

Hazelnuts

Hazelnuts, also called filberts, are round or oblong edible nuts of a deciduous shrub or small tree grown commercially in the Mediterranean region and in the Pacific Northwestern region of the United States. They are marketed both in-shell and shelled. Nearly all in-shell hazelnuts sold in the United States are for household consumption during October through December, either alone or mixed with other nuts. A large proportion of the shelled hazelnuts is salted and roasted for use in nut mixes. Shelled hazelnuts are also used by bakers, confectioners, and household consumers.

Macadamias

Macadamias grow on tropical and subtropical trees indigenous to Australia. In the United States, nearly all macadamia nuts are grown in Hawaii. The nut matures on the tree and has a hard brown shell, spherical in shape and extremely difficult to crack. The nut has been described as the "perfect nut" because of its distinctive flavor and crunchy texture, and is generally sold at premium prices. Virtually all macadamias are sold shelled as roasted nuts or sold to confectioners and bakers.

Pecans

Pecans are the nuts of a species of hickory tree native to a large part of the Southern and Central United States. About 85 percent of the pecan crop is marketed in the shelled form.

Bakeries use over one-third of the shelled pecans, followed by household consumers (retail packages) and confectioners, who use about one-fourth each. Most of the remainder is used by ice cream manufacturers, mixers, and salters. In-shell pecans are marketed through the grocery trade, alone or in mixtures with other nuts, mostly during the fall and winter months.

Pistachios

Pistachios are native to the Mediterranean region and the Middle East. California is the principal producing area in the United States. The pistachio is a small, green nut shaped like a peanut and enclosed in a thin shell that usually splits down one side when ripe. Pistachios are mainly sold in-shell for salting and eating out-of-hand. Shelled pistachios are used mostly in ice cream and confectionery products and as roasted nuts.

Walnuts

There are two main types of walnuts: the English (or Persian) walnut and the black walnut. English walnuts are by far the most important item in both domestic production and international trade. English walnuts are the product of a large deciduous tree native to the Middle East. California accounts for nearly all of the U.S. output of English walnuts. The egg-shaped nuts are an inch or more in diameter; however, each of the several commercial varieties has its own characteristic shape. In-shell English walnuts are graded according to size, exterior appearance, and color of the kernel. Practically all in-shell English walnuts are for household consumption. Shelled English walnuts are used in the bakery, ice cream, and confectionery industries.

The black walnut is not grown commercially, but black walnuts are gathered throughout the United States from native trees on a commercial basis. They have a low in-shell value because they are difficult to crack and the kernels constitute only 10 to 20 percent of their weight. Black walnuts are used primarily in the baking industry.

Other Tree Nuts

Edible nuts covered by this category that are not produced in commercially significant quantities in the United States, but which are important in international trade include Brazil nuts, cashews, coconuts, chestnuts, and pignolias.

Brazil nuts

Brazil nuts are produced only in the Amazon Valley, chiefly in Brazil, and to some extent in Bolivia and Peru. The hard-shelled nuts, which resemble segments of the orange in shape, are usually an inch or more in length. The in-shell nuts are used in nut mixtures or sometimes alone for household consumption. The major use of shelled Brazil nuts is in salted nut mixtures, but they are also used extensively in confectionery and bakery products.

Cashews

Cashew trees are native to tropical South America, but the tree has been naturalized in many tropical countries. When the nut is shelled and roasted, it is similar to a blanched peanut in color, but is a crescent-shaped nut and frequently larger than the peanut. Most cashew nuts are consumed in the United States as roasted and salted nuts alone or in mixtures. Cashew nuts, to a lesser extent, are used in the confectionery and bakery industries.

Coconuts

Coconuts, which are grown in the tropics, are used predominantly for the production of coconut oil. This summary, however, only covers coconuts used for food or other edible purposes. The hard-shelled nuts, usually 3 inches or more in diameter, are borne inside a thick husk. The white meat (coconut meat), which contains the oil, covers the inside of the shell. The hollow center of the nut contains a liquid commonly referred to as coconut milk. Small quantities of whole, fresh coconuts are shipped to countries in the temperate zones for direct food use. Coconut meat is shredded or ground into a variety of sizes and then dried (desiccated). It usually enters commerce in this form, and is subsequently impregnated with sugar in the consuming countries before distribution to consumers. Coconut meat is sold for household use and also is used widely in commercial confectionery and bakery products.

Fresh or frozen coconut meat, not over 10 percent sugar, by weight, is a very minor item of trade compared with desiccated coconut meat, and is used primarily in household culinary and fresh bakery goods. Commercial products embraced by the description "coconut meat, otherwise prepared or preserved" include shredded coconut meat in sugar sirup used in dessert toppings; frozen coconut meat that is over 10 percent sugar, by weight, and used primarily in fresh bakery goods; and roasted coconut used as a confection.

Chestnuts

The chestnut is brown and generally globular. Crude, peeled, and dried chestnuts are eaten raw or boiled or roasted first. Chestnuts are served in salads and in stuffing. Of lesser importance are chestnuts preserved in water or syrup, as well as candied, crystalized, and glaze chestnuts.

Pignolias

The pignolia nut (pine nut) is a long slender nut produced from certain species of pine trees. Domestic pine nuts are produced from different species of pine trees, which account for their shorter length and stubbier shape. Pine nuts are eaten out-of-hand, either raw or roasted; they are also used as ingredients or garnishes for food dishes.

Miscellaneous tree nuts and nut products

Included herein are such nuts as ginkgo nuts, lotus nuts, dried longans, white nuts, and lychee nuts and nut products such as canned longans and lychees and kernel paste. Most of these nuts are produced and consumed in Asian countries. In the United States these nuts are specialty items consumed generally by people of Asian descent. Kernel paste is a mixture of sugar and bitter apricot kernels from which nearly all of the bitter hydrocyanic acid has been removed. Kernel paste is used by commercial bakeries in cookies and pastries as a substitute for almond paste. Also included in this summary are otherwise prepared or preserved, primarily roasted, watermelon and pumpkin seeds. They are eaten as snack foods. However, no information is available on commercial production of melon seeds for this use.

Peanuts

Peanuts (or groundnuts) are the seeds of an annual legume that grows close to the ground and bears nuts below the surface. The papery pods range from about 3/4 inch to 2 inches in length and usually contain two kernels, although three kernels predominate in some varieties.

Peanuts are grown throughout the world, with the greatest production in Asia and Africa. The products that enter commerce from these areas, however, are mostly in the form of peanut oil and peanut meal. In most years, about one-half of the U.S. peanut production is eaten domestically, principally in the form of peanut butter, followed by peanut candy, salted shelled nuts, and nuts roasted in-shell. The remaining peanuts are crushed for oil and meal, exported, used for seed or feed, or consumed on the farm.

There are three principal types of peanuts grown in the United States: Virginia, Spanish, and Runner. Each of these three types is preferred for particular uses because of differences in flavor, oil content, size, and shape, but to some extent all can be utilized interchangeable. Practically all peanuts marketed in-shell are of the Virginia type. However, the bulk of the Virginia type are shelled, generally with the larger nuts used for salting and the smaller nuts made into peanut butter or confectionery. Almost all peanuts of the Spanish and Runner types that enter commercial channels are shelled before reaching consumers. Substantial quantities of Spanish peanuts are also salted, but their principal uses are in the manufacture of peanut butter and peanut candy. Runner-type peanuts are used primarily in the manufacture of peanut butter and confectionery.

Salted peanuts are generally roasted in oil and packed in retail-size transparent plastic bags and hermetically sealed cans. Dry-roasted salted peanuts are also marketed in significant quantities. The primary use of peanut butter is in the home, but large quantities are also used in the commercial manufacture of sandwiches, candy, and bakery products.

In the United States, low-grade or culled peanuts not suitable for the edible market are used for the production of peanut oil. Such peanuts, and those used for seed or feed, are not covered by this summary.

U.S. INDUSTRY PROFILE

Industry Structure

Figure 1 shows the structure of the U.S. edible nut industry. Growers market edible tree nuts principally either to a grower-owned cooperative or to an independent processor. Growers marketing their nuts to independent processors may sign a contract promising to deliver their nuts to the processor at the market price at the time of delivery, or they may wait until harvest time and sell them to processors on the spot market. Processors usually announce their prices in the early fall. Upon harvest, the grower delivers his production to a receiving station, where a sample is taken of the load to determine the percentages of (1) each size grade, (2) culls that do not meet size or quality requirements, and (3) trash. The independent processors typically pay a percentage to the grower within a week of delivery, with balance paid by the end of the marketing year.

Some growers market their production through a cooperative under a continuing agreement. The cooperative establishes a base price in the fall and pays the grower an advance based on a percentage established in the contract. The cooperative then pays the growers at predetermined intervals a percentage of the base price from a pool of profits and receipts from the marketing of the crop. The final payout may ultimately be higher or lower than the base price. In addition, some funds are held back as retained earnings for capital investment by the cooperative.

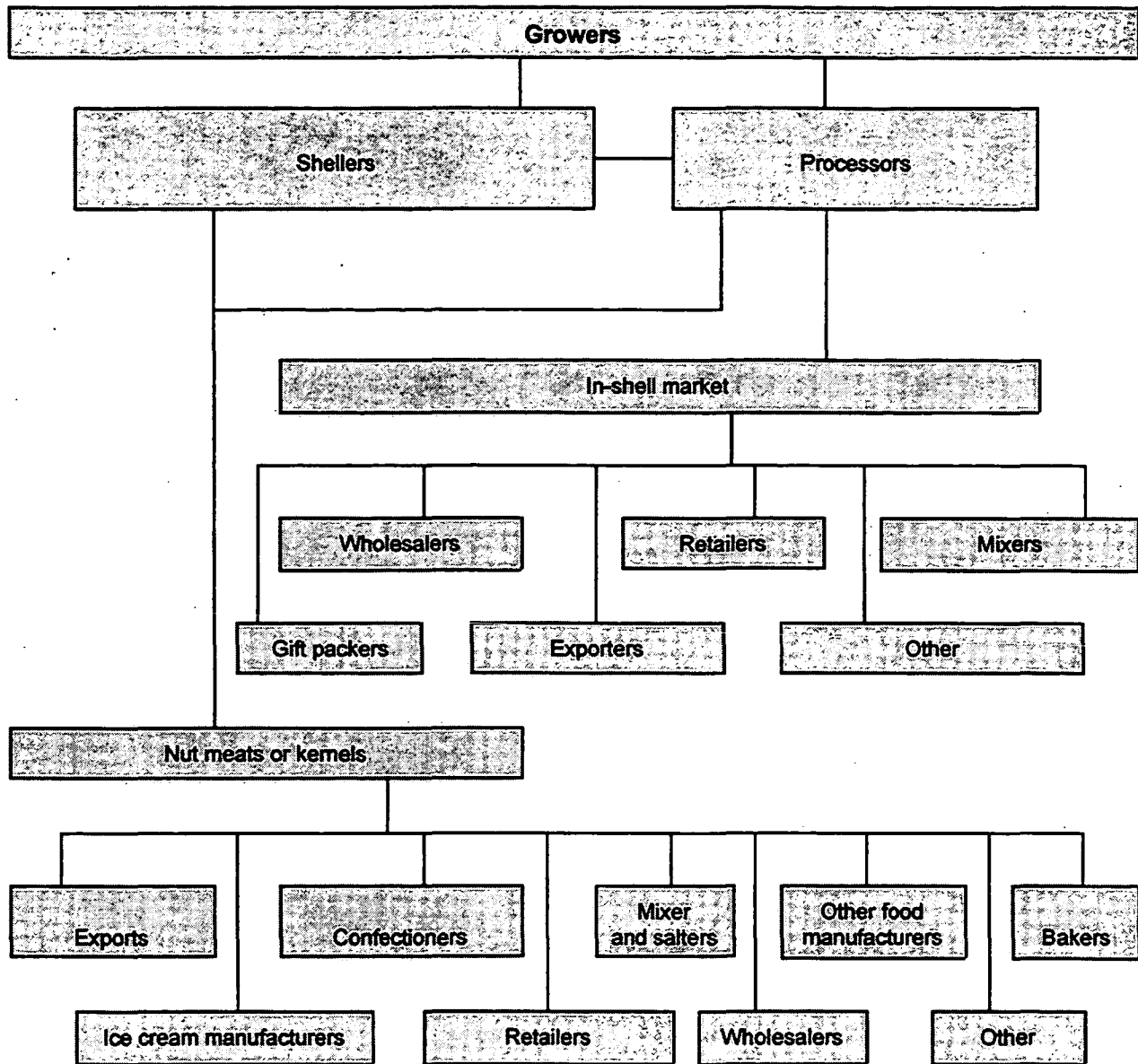
Processors typically pack a wide array of products with either the processor's brand or the distributor's brand labels. Processors sell the packed nuts (in-shell or shelled) through food brokers, retail distributors, and food service users.

Most edible nut production moves through the market channels from the grower to the processor, where the nuts are cleaned and shelled. This is particularly true for almonds, macadamias, peanuts, and pecans. They are then sold to the manufacturer, and finally to the consumer. Other edible nut production (primarily hazelnuts, pistachios, and walnuts) move from the grower to the processor to distributors to retail outlets, and finally to the consumer as in-shell nuts. However, a substantial share of these nuts types are also marketed as shelled nuts.

Production

There are two distinct production processes for edible nuts: one for tree nuts and another for peanuts. The growing of tree nuts is a long-term operation. Depending on the variety or type of nut and cultivar planted, the first harvest may be from 3 to 7 years after planting of the trees. Once the trees are established they may remain productive for decades. Nut trees tend to be an alternating crop, meaning a large nut harvest is followed by a "short" or small nut harvest. Thus, a sharp drop in production is not uncommon in the edible tree nut industry inasmuch as nut trees require time to recover from the stress of a heavy production year.

Figure 1
Structure of the edible nut industry



Source: U.S. Department of Agriculture.

An edible tree nut grove involves careful planting including timing of planting, planting method and selection of varieties, watering, fertilization, pest control, etc. Some varieties of tree nuts are self-pollinating.² Other varieties require pollen from another cultivar (known

² 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 stamen or pollen, or cannot pollinate or fertilize their
 (continued...)

as "cross pollination") to bear nuts. For varieties that require cross-pollination (e.g., almonds and hazelnuts) it is essential that sufficient pollen producing cultivar are planted to ensure pollination. Pollinators should be vigorous pollen- producers and blossom at the same time as the cultivar to be pollinated.

Nut trees must be propagated vegetatively, as tree seedlings always vary from the parent tree.³ Propagation is accomplished by grafting or budding the desired cultivar to a botanically related compatible rootstock. Rootstocks vary greatly in the vigor and characteristics that they impart to the scion⁴ variety.

The establishment of a nut grove is capital-intensive, with costs ranging up to \$10,000 per acre. Major expenses include the cost of trees, land preparation, and irrigation equipment, and the labor involved in laying out the orchard or grove and in planting and pruning trees. Once a nut grove is established, production of tree nuts becomes labor-intensive, with peak labor requirements at pruning (during the winter months or dormant growing period) and particularly at harvesting. All edible tree nuts require further processing after harvesting before they are marketed.

The production process for peanuts is a short-term operation compared to tree nut production. Peanuts are an annual crop replanted each year. However, peanut production requires the commitment of more land resources because peanuts need to be grown in a rotation with other crops to maximize returns. Crop rotation enhances the yield and quality of the next crop by reducing diseases, pests, and recycling nutrients. This in turn reduces fuel, fertilizer, and pesticide costs. Most rotations will require two to four times as much land to be out of peanut production as is in production. Corn, cotton, and cereal grains are used in many of the rotations.

Peanut production is capital-intensive. Major expenses included land preparation, irrigation equipment, and specialized planting and harvesting equipment. Like tree nuts, peanuts require further processing after harvesting before they are marketed.

Processing

When tree nuts reach maturity they are harvested by either knocking or shaking the nuts from the tree (by machine or by hand) or the nuts are allowed to fall to the ground naturally (after which they may be gathered by machine or by hand). The nuts are gathered and sent to a processing facility where the external hull is removed. Timely removal of the external hull is essential if the nut is to be sold to the in-shell market. If the hull is not removed, the nut shell will be discolored and not acceptable to the retail consumer. Quick removal of the

² (...continued)

own flower because of sexual incompatibility. These varieties are self-sterile or self-unfruitful, and require pollen from another variety to bear nuts.

³ Pecans are the only major commercially produced domestic tree nut that has significant production from seedlings. Black walnuts, a minor domestic tree nut, are produced almost entirely from seedlings.

⁴ A scion is the branch or part of a branch with at least one bud that is grafted to the rootstock.

hull also prevents insect and rodent damage, mold, and off-flavors that affect the quality of the shelled nut kernels. After the hull is removed, the in-shell nut is dried, sized, and sorted. Nuts that are intended for the in-shell market will be sent to storage. Nuts that are to be shelled will be stored until such time as they can be cracked. The kernels are sorted, graded, packaged, and stored.

Peanut processing begins at the farm level with digging, shaking, windrowing, curing and combining. The timing of the process is critical to the grower since peanuts may gain 100-200 pounds per acre in yield and increase 2 to 3 percentage points in grade from 1 to 2 weeks before optimum harvesting time.⁵ Post-harvest processing starts with the "first handler"⁶ at the buying point. The first handler removes all foreign material and dries the in-shell peanuts. The first handler also tests for the presence of *aspergillus flavus* mold⁷ and segregates lots that have it visible.⁸ The first handler may store the in-shell peanuts or send them to a sheller (who may also be the first handler). The sheller screens in-shell peanuts, and shells, packages, and stores shelled peanuts. Shellers also perform commercial market and Commodity Credit Corporation (CCC) functions by selling edible peanuts to processors and by bidding on CCC loan peanuts to be used for crushing and for export.

Number of Firms and Industry Concentration

Number

According to the 1997 U.S. Census of Agriculture, the number of tree nut farms declined by nearly 5 percent from the prior Census number done in 1992 (table 1). The number of tree nut farms declined for all of the principal tree nut types except for pistachios and other tree nuts. The decline in the number of farms is believed to be the result of the tendency toward fewer and larger farms to take advantage of economies of scale. The large increase in the number of farms producing pistachios was the result of the industry's relative recent development. Pistachios have only been produced commercially for about three decades in the United States. Only macadamias had a net decline in acreage between the two period.

The number of farms harvesting peanuts declined by 24.5 percent, from 16,194 farms in 1992 to 12,221 farms in 1997 according to the 1997 Census of Agriculture. Over the same period, the average number of acres harvested per farm increased from 99 acres to 111 acres. As the industry has become more capital-intensive, economies of scale have become more important and give larger growers a competitive advantage.

⁵ The University of Georgia Cooperative Extension Service College of Agriculture and Environmental Science, *1996 Peanut Update*, pg. 47.

⁶ First handler is a firm that receives in-shell peanuts from a grower.

⁷ Some strains of *aspergillus flavus* mold produce toxic metabolites that are referred to as "aflatoxin." Aflatoxin is highly toxic and carcinogenic.

⁸ Peanuts that have *aspergillus flavus* mold present must be sent to a crusher.

Table 1
Edible nuts: Number of farms and acreage, 1992 and 1997

Type	Farms producing		Percentage change	Acreage		Percentage change
	1992	1997		1992	1997	
Almonds	6,263	6,045	-3.5	441,700	540,276	22.3
Hazelnuts	1,280	1,112	-13.1	32,674	32,721	0.1
Macadamias	1,485	1,391	-6.3	23,155	20,908	-9.7
Peanuts	16,194	12,221	-24.5	1,594,611	1,352,155	-15.3
Pecans	21,206	19,923	-6.1	473,426	519,054	9.6
Pistachios	1,051	1,140	8.5	69,344	94,384	36.1
Walnuts (English)	7,276	6,850	-5.9	214,159	235,175	9.8
Other tree nuts	582	764	31.3	2,583	5,059	95.9
Total	55,337	49,446	-10.6	2,851,652	2,799,732	-1.8

Source: 1997 U.S. Census of Agriculture.

Concentration

According to the 1997 Census of Agriculture, California has the largest number of commercial tree nut growers and accounts for the majority of the growers and production of almonds, pistachios, and walnuts. Oregon has the largest number of growers and the majority of the production of hazelnuts. Hawaii accounts for virtually all of the growers and production of macadamias. The Southeastern United States (primarily Georgia) and the Southwestern United States (Texas and New Mexico), account for the majority of the growers and production of pecans and peanuts.

Employment

Data on employment in the U.S. edible nut industry are not available because workers used to produce edible nuts may be used to produce a variety of other agricultural crops. A considerable amount of actual labor in the edible nut growing section is "unpaid" labor of the grower and other family members. Labor is, however, a principal input in the growing of peanuts and tree nuts. Operations such as planting, field preparation, orchard and grove care, harvesting, grading, and packaging, require substantial hand labor. Capital expenditures are also high in edible nut production. Capital expenditures include equipment for mechanized planting, cultivation, harvesting, irrigation, drying, and grading.

Labor Skill Levels, Level of Automation, and Productivity

The edible nut production process requires careful preparation and timing by the grower. Edible nuts are semiperishable articles that may have a shelf life of a few days if not properly cared for. In the case of tree nuts the rapid removal of the external hull is essential in preventing insect damage and discoloration that reduce quality. Edible nut production requires strict adherence to sanitation and handling requirements to produce quality finished

products. Farm labor involves a wide array of mechanical, horticultural, and managerial skills. For most edible nut producers, economic returns from growing edible nuts can be attributed to their own labor, managerial skills, and capital investment (such as machinery), and on land, as well as returns on risk taking. The growing of edible nuts has become a highly mechanized operation in the United States. Production at the grower level (as measured by yield per acre) has been erratically increasing for the last several decades, largely because of better horticultural and harvesting practices and improved tree and plant varieties.

Pricing Practices

Wholesale prices for edible nuts generally are quoted at markets and production areas around the country based on price quotes published by various State agriculture departments, the USDA, and private organizations. The published price information is collected by these organizations through telephone conversations with sources such as processors, wholesalers, and brokers.

Prices for major edible nuts during 1995-99 are given in table 2. Prices for edible nuts fluctuate yearly because of the biennial production cycle for tree nuts and weather conditions. Peanut prices are more stable because of the U.S. peanut price support programs.

Table 2
Edible nuts: Season-average prices received by producers for major edible nuts, 1995/96-1999/00

Nut type	1995/96	1996/97	1997/98	1998/99	1999/00
	<i>Cents per pound, shelled basis</i>				
Almonds	248.0	208.0	156.0	104.0	(¹)
Hazelnuts	118.0	111.6	123.9	119.7	(¹)
Macadamias	329.1	341.8	330.0	286.6	(¹)
Peanuts ²	29.3	28.1	26.1	28.3	³ 27.9
Pecans	222.1	143.1	175.0	270.9	(¹)
Pistachios	249.1	301.3	271.5	255.0	(¹)
Walnuts	165.6	192.8	173.8	122.5	(¹)

¹ Not available.

² Farmer's stock basis (in-shell).

³ Forecast by USDA.

Source: USDA, NASS, "Fruit and Tree Nut Situation and Outlook," FTS-287, Oct. 1999 and USDA, ERS, "Oil Crops Situation and Outlook Yearbook," Oct. 1999.

U.S. Government Programs

Peanuts

The United States has had programs designed to stabilize domestic peanut prices since 1934. The program for crop years 1996 through 2002 is based on the Federal Agriculture

Improvement and Reform Act of 1996. This act regulates the production of peanuts through a national poundage quota system, and maintains the price through a two-tier price-support system, consisting of a higher price for peanuts produced within the quota (quota peanuts) and a lower price for those produced outside the quota ("additional" peanuts). Peanuts produced by domestic quota holders within the national poundage quota are eligible to be placed on loan with the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC) at the quota support price. For the 1999 crop, the national average support price was \$610 per short ton⁹ for quota (domestic edible use) peanuts and \$175 per short ton¹⁰ for "additional" (all other) peanuts. The national poundage quota for the 1999 crop was 1,180,000 tons. The quantity is the sum of domestic food and related uses as determined by the Secretary of Agriculture.¹¹ The peanut program provides farmers with a minimum price for peanuts that are used in the U.S. edible market and produced within the national poundage quota. This price is usually above the world market price for peanuts. Peanuts grown by non-quota-holding farmers and by quota holders in excess of their poundage quota (additional) can not be sold into the edible market, but must be exported, sold into the domestic crush market, or placed under loan with the area growers association at a substantially lower support price.

Market promotion

The U.S. edible nut industry conducts market promotion activities domestically and in foreign markets. The majority of the promotional activities involve almonds, peanuts, pistachios, and walnuts. Market promotion activities include in store demonstrations, printing and distribution of point-of-sale information, baking seminars, distribution of recipes, and distribution of material on the nutritional value and health benefits of nuts in the diet as a source of plant protein, vitamins, minerals, and fiber.¹² Market promotion activities in foreign markets also involve educating foreign users to the availability and quality of U.S. edible nuts. Emphasis is also placed on how edible nuts should be used and how they add value to food products.

Edible nuts are consumed throughout the United States. They are purchased both for home use and by establishments in the food service industry. Significant quantities are also further processed (in particular peanuts and to a lesser extent almonds) into butters and spreads. The majority of the edible nuts purchased by consumers are shelled nuts which are used in products manufactured by confectioners, bakeries, and nut salters. Cashews and macadamias are almost always marketed shelled and over 90 percent of the almonds and pecans are sold in the shelled form. On the other hand, the bulk of hazelnuts and pistachios are marketed as in-shell nuts. The principal markets for in-shell nuts are in nut mixtures during the end of year holidays or as straight packs to consumers.

⁹ By law, the national average quota support level for 1996 through 2002 crop peanuts is \$610 per short ton.

¹⁰ The additional support rate is set by the Secretary of Agriculture after considering the demand for peanut oil and peanut meal, expected prices of other vegetable oils and protein meals, and the demand for peanuts in foreign markets. The support rate on additional peanuts must be set at a level estimated to ensure no loss to the CCC on the sale or disposal of additional peanuts.

¹¹ USDA, FAS, commodity fact sheet, Peanut 1999 Support Program and Related Information, Oct. 1999.

¹² California Walnut Commission, Annual Report 1996-97, Oct. 1996.

Market access

In 1997, U.S. exports of almonds, peanuts, pistachios, and walnuts were eligible for benefit from USDA under the Market Access Program (MAP). MAP forms a partnership among small business, cooperatives, State-regional trade groups, and trade associations, and FAS to use the experience of specialists deployed around the world and share the costs of eligible overseas marketing and promotional activities.¹³ In fiscal year 1999, the American Peanut Council received \$640,276; Blue Diamond Growers/Almond Board of California received \$1,246,738; California Pistachio Commission received \$835,781; and the California Walnut Commission received \$2,197,640.

Commercial export credit guarantee¹⁴

U.S. exports of edible nuts may also qualify for funds under the Commercial Export Credit Guarantee Programs (specifically, the Export Credit Guarantee Program (GSM-102), and Intermediate Export Credit Guarantee Program (GSM-103). The GSM-102 program guarantees repayment of short-term credits (90 days to 3 years) extended by U.S. financial institutions to eligible banks in countries that purchase U.S. farm products. Guarantees issued under the GSM-103 program cover financing periods of more than 3 years up to 10 years. This program is designed to help developing nations make the transition from concessional financing to cash purchases. There were no applications for edible nuts by exporters in FY 1999 under the GSM-102 or GSM-103 programs.

Supplier credit guarantee¹⁵

The Supplier Credit Guarantee Program is designed to encourage U.S. exporters to expand, maintain, and develop markets for U.S. agricultural goods in areas where commercial financing may not be available without a CCC payment guarantee. The program can help U.S. exporters who wish to provide short-term credit (180 days or less) directly to their foreign buyers. Exporter applications totaling \$40,000 were received by USDA in FY 1999 for edible nuts.

¹³ USDA, FAS, Summary of Program Activities, found at <http://www.fas.usda.gov/excredits/quarterly/1999/dec-sum.html>, retrieved Feb. 29, 2000.

¹⁴ Ibid.

¹⁵ Ibid.

U.S. MARKET

Demand Factors

Most of the U.S. edible nut market is a “captive” market, i.e., the use of a particular nut in a product has become highly accepted; hence, a manufacturer may find that any changes from one nut type to another could lead to lost consumer identity and result in a loss of sales. Therefore, a substantial price difference or availability of a particular nut may not be sufficient to cause a manufacturer to change a product’s formulation.¹⁶ Manufacturers that produce mixes of nuts are an important exception. Such firms frequently substitute nuts of one kind for another in order to obtain as economically priced a mix as possible. Generally, at the consumer point-of-purchase level, price does not seem to have a major role in the decision as to what type of nut to buy. The purchase decision at this level is probably influenced more by the end use of the item, or the last nut type purchase made, rather than on the prices of the various nut types available.

Domestic and imported nuts compete on a limited basis. In general, nuts that are produced on a commercial basis in the United States are not imported in significant quantities except for hazelnuts, macadamias, peanuts, and pecans. Nuts that are imported in significant quantities usually are not produced on a commercial basis in the United States (cashew nuts and Brazil nuts). U.S. edible nuts and nut products are recognized by end users and consumers as being of high quality and competitively priced as compared to imported nuts.

Consumption

Domestic consumption of edible nuts increased steadily from 1,828 million pounds (shelled basis) in 1995/96 to 2,015 million pounds in 1998/99 (the last year complete data are available).¹⁷ Consumption of tree nuts increased from 512 million pounds (shelled basis) in 1994/95 to 605 million pounds in 1998¹⁸ (table 3).

In most years, imports of tree nuts account for about 40 percent of U.S. consumption. Imports of noncompetitive tree nuts (i.e., those not produced in commercial quantities in the United States, primarily cashews and Brazil nuts) accounted for 79 percent of all imports and approximately 32 percent of U.S. consumption in 1999. Domestic consumption of almonds, pistachios, and walnuts is supplied almost entirely from domestic sources. Pecan

¹⁶ Milling and Baking News, *Tree Nuts: A Specially Product Taste Enhances*, Apr. 2000, found at http://www.bakingbusiness.com/feature_stories.asp?ArticleID=30569, retrieved May 1, 2000.

¹⁷ Peanut consumption was converted from farmers’ stock to shelled basis by the following formula: farmers’ stock multiplied by 0.66.

¹⁸ The last year full marketing year data are available.

Table 3

Edible nuts: Beginning and ending stocks, marketable production, imports for consumption, exports of domestic merchandise, U.S. consumption, and ratio of imports to consumption, marketing years 1995/96-1999/00¹

Commodity	Market year	Beginning stocks ²	Marketable production ³	Imports	Exports	Ending stocks	U.S. consumption	Ratio of
								imports to U.S. consumption
<i>Million pounds, shelled basis</i>								<i>Percentage</i>
Almonds	1995/96	204.8	351.4	0.6	338.4	92.8	125.6	0.5
	1996/97	92.8	486.3	1.2	401.4	48.3	130.6	.9
	1997/98	48.3	726.2	0.1	462.8	172.0	139.8	.1
	1998/99	172.0	496.3	0.1	420.0	100.4	148.0	.1
	1999/00	100.4	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Hazelnuts	1995/96	0.4	28.6	11.2	13.3	4.1	22.8	48.9
	1996/97	4.1	13.8	3.2	13.9	0.4	6.8	47.8
	1997/98	0.4	31.4	8.6	18.0	1.4	21.0	41.0
	1998/99	1.4	11.7	12.5	7.8	1.0	16.8	74.4
	1999/00	1.0	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Pistachios	1995/96	16.8	59.5	0.4	31.5	13.8	31.4	1.3
	1996/97	13.8	40.4	0.9	32.2	7.7	15.2	5.9
	1997/98	7.7	74.9	0.2	34.5	9.7	38.6	(⁵)
	1998/99	9.7	76.0	0.7	29.2	7.0	50.2	(⁵)
	1999/00	7.0	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Pecans	1995/96	55.0	122.2	27.7	17.4	85.9	101.6	27.2
	1996/97	85.9	93.9	28.1	19.6	59.7	128.6	21.9
	1997/98	59.7	148.1	24.6	20.8	98.0	113.6	21.6
	1998/99	98.0	65.5	28.4	13.6	45.5	132.8	21.4
	1999/00	45.5	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Macadamias	1995/96	(⁴)	11.5	5.6	2.4	(⁴)	14.7	38.4
	1996/97	(⁴)	12.9	5.5	3.1	(⁴)	15.3	35.9
	1997/98	(⁴)	13.2	7.1	8.9	(⁴)	11.4	62.8
	1998/99	(⁴)	13.0	7.0	9.0	(⁴)	11.0	63.7
	1999/00	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Walnuts	1995/96	56.9	196.9	2.3	98.3	55.3	102.5	2.2
	1996/97	55.3	169.6	13.4	102.7	40.3	95.3	14.1
	1997/98	40.3	220.5	2.5	94.1	67.6	101.6	2.5
	1998/99	67.6	186.3	2.9	96.4	59.4	101.0	2.9
	1999/00	59.4	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)

See footnotes at end of table.

Table 3--Continued

Edible nuts: Beginning and ending stocks, marketable production, imports for consumption, exports of domestic merchandise, U.S. consumption, and ratio of imports to consumption, marketing years 1995/96-1999/00¹

Commodity	Market year	Beginning stocks ²	Marketable production ³	Imports	Exports	Ending stocks	U.S. consumption	Ratio of
								Imports to U.S. consumption
								Percentage
<i>Million pounds, shelled basis</i>								
Other tree nuts	1995/96	(⁴)	(⁴)	156.2	42.5	(⁴)	113.7	(⁶)
	1996/97	(⁴)	(⁴)	173.5	32.9	(⁴)	140.6	(⁶)
	1997/98	(⁴)	(⁴)	188.5	44.4	(⁴)	144.1	(⁶)
	1998/99	(⁴)	(⁴)	190.0	45.0	(⁴)	145.0	(⁶)
	1999/00	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Total	1995/96	334.1	770.1	204.0	545.7	251.9	512.3	39.8
	1996/97	251.9	816.9	226.0	607.2	156.4	532.4	42.4
	1997/98	156.4	1,214.4	234.1	683.6	348.7	570.1	41.1
	1998/99	348.7	848.7	241.8	620.9	213.3	604.8	40.0
	1999/00	213.3	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)

¹ Marketing year begins July 1 for almonds, hazelnuts, macadamias, pecans, and other tree nuts; Aug. 1 for peanuts and walnuts; and Sept. 1 for pistachios.

² Beginning stocks figure for almonds from the Almond Board of California, hazelnuts from the Hazelnut Marketing Board, pistachios from the California Pistachio Commission, walnuts from the Walnut Marketing Board, and peanuts and pecans from USDA, NASS.

³ Utilized production minus inedibles and noncommercial use except for peanuts. Peanut production is farmers' stock converted to shelled basis by multiplying farmers' stock production by 0.66.

⁴ Not available.

⁵ Less than 0.05 percent.

⁶ Not meaningful.

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

consumption is supplied primarily from domestic sources, with imports accounting for less than 25 percent of consumption. Only macadamias and hazelnuts had import to consumption ratios higher than 50 percent in 1998/99 (table 3). The rise in the import to consumption ratio for hazelnuts in 1998/99 was caused by a small U.S. crop and the increased availability of imports from Turkey.

Consumption of peanuts increased from 1,993 million pounds, farmers' stock basis (1,424 million pounds shelled basis), in 1995/96 to 2,160 million pounds, farmers' stock basis (1,543 million pounds, shelled basis), in 1999 (table 4). Greater interest in natural foods, health benefits, and an increase in discretionary income are believed to be the principal reasons for the rise in consumption of edible nuts. Imports of peanuts and certain peanut products ranged between 6.3 percent and 7.7 percent of consumption during 1995-99. U.S. tariff rate quotas (TRQs) on peanuts and certain peanut products have increased the access of foreign peanuts to the U.S. market but the high overquota rates of duty have limited imports above the quota level.

Table 4
Peanuts: Beginning and ending stocks, U.S. production, imports for consumption, exports of domestic merchandise, and domestic consumption, marketing years 1995/96-1999/00

Marketing years ¹	Beginning stocks	Marketable production ²	Imports	Exports	Crushed for oil	Ending stock	Apparent	Ratio of
							consumption for food use	imports to consumption
Million pounds, farmers' stock basis							Percentage	
1995/96	1,198	3,223	153	824	999	758	1,993	7.7
1996/97	758	3,297	127	666	692	795	2,029	6.3
1997/98	795	3,236	141	681	544	848	2,099	6.7
1998/99	848	3,589	155	561	460	1,436	2,135	7.3
1999/00 ² . . .	1,436	3,499	165	800	700	1,440	2,160	7.6

¹ Marketing year beginning Aug. 1.

² Marketable production = production less feed use, loss, shrinkage, and residual.

³ Forecast by the USDA, NASS.

Source: USDA, ERS, *Oil Crops Situation and Outlook /OCS-1999*, Oct. 1999.

U.S. Production

During 1995-99, the value of U.S. production of edible nuts ranged from a high of \$3.0 billion in 1997 to a low \$2.5 billion in 1998 and 1999 (table 5). U.S. tree nut production ranged from a low of \$1.4 billion in 1998 to a high of \$2.1 billion in 1997 and totaled \$1.5 billion in 1999. The wide swing in the value of production was primarily the result of fluctuation in output in the case of tree nuts owing to their alternate bearing habit. The value of U.S. production of peanuts declined irregularly from 1.0 billion in 1994 to \$932 million in 1997, then rose to \$1.1 billion in 1998 and 1999. Weather and pests are the principal factors affecting U.S. production of peanuts.

Table 5
Edible nuts: Value of U.S. production, crop-years 1995/96-1999/00

Type	1995/96	1996/97	1997/98	1998/99	1999/00
	<i>Million dollars</i>				
Almond	881.0	1,018.4	1,106.6	703.6	677.3
Hazelnuts	35.6	16.3	42.3	14.9	33.5
Macadamia	37.8	44.1	43.5	37.4	35.5
Peanuts ¹	1,013.3	1,029.8	932.2	1,109.6	1,066.0
Pecans	271.4	134.4	259.2	177.5	273.7
Pistachios	161.3	121.8	203.4	193.6	159.8
Walnuts (English)	327.6	328.6	384.7	238.4	294.0
Others ²	2.0	2.0	2.0	2.0	2.0
Total	2,730.0	2,695.4	3,027.9	2,477.0	2,541.8

¹ Data includes peanuts crushed for peanut oil and peanut meal.

² Estimated by the staff of the United States International Trade Commission.

Note.—Value of production is on a crop year basis beginning the year indicated.

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

U.S. Trade

Overview

The United States registered a substantial trade surplus in edible nuts in every year during the period 1995-99 (table 6). The surplus increased from \$953 million in 1995 to a peak of \$1.1 billion in 1996. The surplus declined steadily thereafter to \$418 million in 1999. Over the period 1995-99, U.S. exports declined from a peak of \$1.7 billion in 1996 to \$1.2 billion in 1999, a decline of nearly 30 percent, while U.S. imports increased over 55 percent to \$794 million. U.S. exports of edible nuts are a major outlet for U.S. production, accounting for 22 percent of U.S. farm output in 1998. India was the only major trading partner with which the United States maintained a deficit over the period ranging from \$98 million in 1995 to \$257 million in 1999. Cashew nuts account for most of the U.S. imports from India. The United States also maintained a trade deficit with Mexico in 4 of the 5 years from 1995 to 1999. The majority of the imports from Mexico consists of pecans.

The United States maintained a substantial trade surplus with the EU over the period, ranging from a high of \$916 million in 1995 to a low of \$566 million 1999. The United States also maintained large trade surpluses with Canada, Japan, and Hong Kong during 1995-99.

The aggregate trade-weighted average rate of duty for edible nuts included in this summary was 0.7 percent ad valorem equivalent in 1999, and the aggregate trade-weighted average rate of duty only for dutiable edible nuts was 3.5 percent ad valorem equivalent. The aggregate trade-weighted average rate of duty only for dutiable tree nuts and certain tree nut products included in this summary was 1.7 percent in 1999, and the aggregate trade-weighted average rate of duty only for dutiable peanuts and certain peanut products was 12.9 percent ad valorem equivalent.

(1,000 dollars)

Item and country	1995	1996	1997	1998	1999
U.S. exports of domestic merchandise:					
Canada	152,797	161,020	166,564	164,300	167,451
Germany	252,987	302,552	224,982	211,096	146,110
Japan	164,548	176,887	152,940	126,513	117,268
Spain	114,525	158,238	97,025	122,548	115,774
Netherlands	118,287	128,253	125,611	116,807	102,558
Mexico	34,514	48,087	51,121	52,222	67,217
United Kingdom	90,717	99,109	81,488	75,778	65,784
Hong Kong	46,000	51,170	61,736	45,833	46,911
India	25,946	25,768	44,819	51,444	41,432
France	61,617	71,568	73,889	64,303	40,893
Italy	47,057	63,317	46,620	54,617	38,677
All other	353,377	380,118	363,840	306,044	262,371
Total	1,462,372	1,666,087	1,490,634	1,391,506	1,212,446
EU-15	927,316	740,448	735,206	735,206	578,703
OPEC	37,284	38,056	40,720	40,720	36,614
Latin America	84,377	91,915	90,211	90,211	100,746
CBERA	9,845	10,681	11,345	11,345	12,191
Asian Pacific Rim	328,230	307,860	230,601	230,601	225,832
ASEAN	26,749	24,397	22,066	11,423	13,535
Eastern Europe	4,552	7,755	5,126	2,219	2,255
U.S. imports for consumption:					
Canada	20,705	24,905	26,193	25,438	27,180
Germany	687	21	101	115	261
Japan	367	302	371	260	486
Spain	512	1,234	2,806	606	1,325
Netherlands	507	34	88	74	310
Mexico	69,823	48,334	50,995	90,187	75,066
United Kingdom	119	267	97	338	933
Hong Kong	2,499	1,571	1,226	1,229	2,327
India	123,593	147,505	163,311	164,966	297,937
France	573	622	786	740	889
Italy	8,362	9,013	8,362	8,447	7,455
All other	281,291	336,604	375,420	367,510	380,169
Total	509,038	570,412	629,756	659,910	794,338
EU-15	11,597	12,290	17,911	11,028	12,497
OPEC	3,030	2,712	3,856	11,194	7,341
Latin America	239,600	251,411	256,885	272,079	263,121
CBERA	15,258	20,114	20,874	18,306	20,379
Asian Pacific Rim	71,639	93,576	112,146	134,817	142,446
ASEAN	40,748	57,488	73,036	85,145	84,027
Eastern Europe	2	0	7	21	86
U.S. merchandise trade balance:					
Canada	132,092	136,115	140,371	138,862	140,271
Germany	252,300	302,531	224,881	210,981	145,849
Japan	164,181	176,585	152,569	126,253	116,782
Spain	114,013	157,004	94,219	121,942	114,449
Netherlands	117,780	128,219	125,523	116,733	102,248
Mexico	-35,309	-247	126	-37,965	-7,849
United Kingdom	90,598	98,842	81,391	75,440	64,851
Hong Kong	43,501	49,599	60,510	44,604	44,584
India	-97,647	-121,737	-118,492	-113,522	-256,505
France	61,044	70,946	73,103	63,563	40,004
Italy	38,695	54,304	38,258	46,170	31,222
All other	72,086	43,514	-11,580	-61,466	-117,798
Total	953,334	1,095,675	860,879	731,595	418,108
EU-15	915,719	728,158	717,295	724,178	566,206
OPEC	34,254	35,344	36,864	29,526	29,273
Latin America	-155,223	-159,496	-166,674	-181,868	-162,375
CBERA	-5,413	-9,433	-9,529	-6,961	-8,188
Asian Pacific Rim	256,591	214,284	118,455	95,784	83,386
ASEAN	-13,999	-33,091	-50,970	-73,722	-70,492
Eastern Europe	4,550	7,755	5,119	2,198	2,169

Note.—Because of rounding figures may not add to totals shown. Imports values are based on customs value; export values are based on f.a.s. value, port of exports.

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

U.S. Imports

The quantity of U.S. imports of edible nuts increased steadily from 476 million pounds, valued at \$509 million, in 1995 to 600 million pounds, valued at \$794 million, in 1999 (table 7), an increase of 26 percent in volume and an increase of 56 percent in value. Imports of edible nuts consist primarily of nut types that are not produced in sufficient quantities by domestic producers to satisfy consumption, such as shelled hazelnuts and shelled macadamia nuts, or are not produced commercially in the United States (cashew nuts, Brazil nuts, and coconuts and desiccated coconut meats). Import trends for the products covered here have been mixed since 1995, with imports of such items as peanuts and peanut product (in particular peanut butter), pecans, and macadamia nuts rising. Imports of almonds, pistachios, walnuts, and hazelnuts fluctuated widely over the same period in responses to U.S. and world supplies.

U.S. imports of peanuts increased as a result of the URA negotiations which increased market access for foreign produced peanuts in the U.S. market. Prior to the URA, imported peanuts were limited under section 22 of the Agricultural Adjustment Act to an annual quota quantity of 1,709,000 pounds or 775.18 metric ton (mt) (shelled basis). Beginning April 1, 1995, imports of peanuts and certain peanut products, from countries other than Mexico, became subject to a tariff-rate quota (TRQ) of 30,393 mt (shelled basis) for the year beginning April 1.¹⁹ The TRQ increased to 52,906 mt in the year 2000. Imports of peanuts and certain peanut products from Mexico are not subject to the overall TRQ. However, imports from Mexico are subject to a TRQ under NAFTA. The NAFTA TRQ level for 1995 was 3,478 mt, and will increase annually through 2007. Beginning in 2008, imports from Mexico will no longer be subject to TRQ limitations.

Principal suppliers and import levels

In 1999, the principal import suppliers (in terms of value) of edible nuts to the U.S. market have been India (38 percent), Brazil (14 percent), Mexico (9 percent), the Philippines (6 percent), and Argentina (5 percent) (table 7). Other suppliers of note were China and Canada. Imports from India consist almost exclusively of cashew nuts while those from Brazil consist primarily of cashew nuts and Brazil nuts along with smaller quantities of macadamia nuts. Mexico's shipments of edible nuts have consisted primarily of pecans. Imports from the Philippines consist almost entirely of coconuts and desiccated coconut meat. Peanuts account for virtually all of the imports from Argentina. Imports from Canada are composed of a wide selection of edible nuts and nut products, but peanut butter and peanut paste are by far the most important items.

¹⁹ Beginning Jan. 1, 1995, import of peanut butter and peanut paste which were not previously subject to section 22 import limitations-became subject to a TRQ of 19,150 mt for the year beginning Jan. 1, increasing to 20,000 mt in 2000. Imports of peanut butter and peanut paste from Mexico are not subject to the URA TRQ limitation, but are subject to provisions of NAFTA.

Table 7

Edible nuts: U.S. imports for consumption, by principal sources, 1995-99

Source	1995	1996	1997	1998	1999
	1,000 pounds				
India	60,501	63,859	73,962	76,029	112,455
Brazil	67,193	68,514	74,955	61,989	47,070
Mexico	74,150	63,771	58,823	83,223	64,915
Philippines	73,748	74,203	81,534	89,486	81,991
Argentina	62,132	76,540	84,566	89,986	93,077
China	9,510	11,537	10,158	10,220	18,004
Canada	31,931	35,970	13,775	34,786	36,217
Turkey	15,768	10,022	4,775	10,974	14,017
Vietnam	434	3,726	8,280	11,775	8,774
Australia	3,539	3,067	3,239	4,988	6,247
All other	76,994	99,512	139,864	125,864	116,839
Total	475,901	510,720	553,931	599,319	599,606
	1,000 dollars				
India	123,593	147,505	163,311	164,966	297,937
Brazil	120,835	134,513	135,371	112,971	114,890
Mexico	69,823	48,334	50,995	90,187	75,066
Philippines	30,998	40,365	44,486	41,282	44,369
Argentina	25,610	35,418	34,418	39,266	36,237
China	12,821	20,598	20,838	25,014	32,762
Canada	20,705	24,905	26,193	25,438	27,180
Turkey	24,978	15,401	22,641	22,082	26,381
Vietnam	881	7,899	15,754	23,156	23,360
Australia	13,481	11,803	14,683	19,115	19,408
All other	65,313	83,671	101,066	96,433	96,748
Total	509,038	570,412	629,756	659,910	794,338
	Unit value (dollars)				
India	\$2.04	\$2.31	\$2.21	\$2.17	\$2.65
Brazil	1.80	1.96	1.81	1.82	2.44
Mexico	0.94	0.76	0.87	1.08	1.16
Philippines	0.42	0.54	0.55	0.46	0.54
Argentina	0.41	0.46	0.41	0.44	0.39
China	1.35	1.79	2.05	0.73	0.75
Canada	0.65	0.69	1.90	2.45	1.82
Turkey	1.58	1.54	4.74	1.97	2.66
Vietnam	2.03	2.12	1.90	2.01	1.88
Australia	3.81	3.85	4.53	3.83	3.11
All other	0.85	0.84	0.72	0.77	0.77
Average	1.07	1.12	1.14	1.10	1.32

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

U.S. Trade Measures

Tariff

Table 8 shows the column 1 rates of duty, as of January 1, 2000, for edible nuts (including both general and special rates of duty) and U.S. exports and imports for 1999. An explanation of tariff and trade agreements terms is shown in appendix A.

During 1999, duties on edible tree nuts ranged from free to 22.4 percent ad valorem equivalent (AVE). Duties on certain peanuts and peanut products are among the highest in the HTS, with a duty of 163.8 percent ad valorem on certain in-shell peanuts. Over 95 percent of the edible nuts covered in this summary entered the United States free of duty or with a duty of less than 5.0 percent AVE in 1999.

Nontariff

There are no significant nontariff measures affecting U.S. imports of edible nuts. The Food and Drug Administration (FDA) is responsible for ensuring that domestic and imported foods are pure, wholesome, safe to eat, and produced under sanitary conditions. FDA also enforces U.S. laws on standards of identity, labeling, and advertising claims. U.S. Customs Service enforces rules for inspection and marking of processed edible nuts. FDA laws and regulations are believed to be some of the most comprehensive in the world and are considered by some foreign competitors as unusually restrictive.

U.S. Government Trade-Related Investigations

On November 16, 1993, the Commission received a letter from the President stating that he had been advised by the Secretary of Agriculture, and that he agreed with the Secretary, "that there is reason to believe that peanut butter and peanut paste are being imported into the United States under such conditions and in such quantities as to render or tend to render ineffective, or materially interfere with, the price support and production adjustment programs for peanuts conducted by the Department of Agriculture."

On June 28, 1994, taking into consideration the Uruguay Round agriculture agreement that provides for a tariff-rate quota to be established on peanut butter and peanut paste in January 1995, the President requested that the Commission suspend indefinitely its investigation on this matter pending further notice. The Commission, on June 22, 1994, indefinitely suspended investigation No. 22-55.

Table 8

Edible nuts: Harmonized Tariff Schedule subheadings; description¹; U.S. column 1 rate of duty as of Jan. 1, 2000; U.S. exports, 1999; and U.S. imports, 1999

HTS subheading	Suffix	Description	Column 1 rate of duty, as of Jan. 1, 2000		U.S. exports, 1999	U.S. imports, 1999
			General	Special ²		
— 1,000 dollars —						
Coconuts, Brazil nuts and cashew nuts, fresh or dried, whether or not shelled or peeled:						
Coconuts:						
0801.11.00		Desiccated	Free		562	41,585
Other:						
0801.19.00	20	In-shell	Free		³ 842	7,772
0801.1900	40	Shelled	Free		(³)	1,278
Brazil nuts:						
0801.21.00		In-shell	Free		943	3,756
0801.22.00		Shelled	Free		240	17,468
Cashew nuts:						
0801.31.00		In-shell	Free		1,341	6,993
0801.32.00		Shelled	Free		1,549	419,220
Other nuts, fresh or dried, whether or not shelled or peeled:						
Almonds:						
0802.11.00		In-shell	7.7¢/kg	Free(A+,CA,E,IL,J,MX)	50,958	44
0802.12.00		Shelled	24¢/kg	Free(A+,CA,E,IL,J,MX)	540,958	91
Hazelnuts or filberts:						
0802.21.00		In-shell	7¢/kg	Free(A+,CA,E,IL,J,MX)	11,328	526
0802.22.00		Shelled	14.1¢/kg	Free(A+,CA,E,IL,J,MX)	3,425	23,558
Walnuts:						
0802.31.00		In-shell	7¢/kg	Free(A*,CA,E,IL,J,MX)	70,413	2
0802.32.00		Shelled	26.5¢/kg	Free(A+,CA,E,IL,J,MX)	77,125	243
0802.40.00		Chestnuts	Free		101	10,900

See footnotes at end of table.

Table 8--Continued

Edible nuts: Harmonized Tariff Schedule subheadings; description¹; U.S. column 1 rate of duty as of Jan. 1, 2000; U.S. exports, 1999; and U.S. imports, 1999

HTS subheading	Suffix	Description	Column 1 rate of duty, as of Jan. 1, 2000		U.S. exports, 1999	U.S. imports, 1999
			General	Special ²		
— 1,000 dollars —						
		Pistachios:				
0802.50.20		In-shell	0.9¢/kg	Free(A*,CA,E,IL,J,MX)	48,371	1,126
0802.50.40		Shelled	1.9¢/kg	Free(A,CA,E,IL,J,MX)	5,372	493
		Other:				
		Pecans:				
0802.90.10		In-shell	8.8¢/kg	Free(A+,CA,E,IL,J,MX)	3,986	26,193
0802.90.15		Shelled	17.6¢/kg	Free(A,CA,E,IL,J,MX)	50,666	46,129
		Pignolias:				
0802.90.20		In-shell	0.7¢/kg	Free(A,CA,E,IL,J,MX)	⁴ 4,153	777
0802.90.25		Shelled	1¢/kg	Free(A,CA,E,IL,J,MX)	⁵ 23,579	28,361
		Other:				
		In-shell:				
0802.90.80	10	Macadamia nuts	1.3¢/kg	Free(A*,CA,E,IL,J,MX)	(⁴)	699
0802.90.80	90	Other	1.3¢/kg	Free(A*,CA,E,IL,J,MX)	(⁴)	1,148
		Shelled:				
0802.90.94		Kola nuts	5¢/kg	Free(A,CA,E,IL,J,MX)	(⁵)	969
		Other:				
0802.90.98	10	Macadamia nuts	5¢/kg	Free(A+,CA,E,IL,J,MX)	(⁵)	31,029
0802.90.98	90	Other	5¢/kg	Free(A+,CA,E,IL,J,MX)	(⁵)	1,665
		Mixtures of nuts or dried fruits of this chapter:				
0813.50.00	40	Containing only nuts	14%	Free(A+,CA,E,IL,J,MX)	1,267	3
		Peanuts, not roasted or otherwise cooked, whether or not shelled or broken:				
		In-shell:				
		Described in general note 15 of the tariff schedule and entered pursuant to its provisions:				
1202.10.05	20	For use as oil stock	9.35¢/kg	Free(A+,CA,E,IL,J,MX)	⁶ 18,429	0
1202.10.05	40	Other	9.35¢/kg	Free(A+,CA,E,IL,J,MX)	(⁶)	0

See footnotes at end of table.

Table 8—Continued

Edible nuts: Harmonized Tariff Schedule subheadings; description¹; U.S. column 1 rate of duty as of Jan. 1, 2000; U.S. exports, 1999; and U.S. imports, 1999

HTS subheading	Suffix	Description	Column 1 rate of duty, as of Jan. 1, 2000		U.S. exports, 1999	U.S. imports, 1999
			General	Special ²		
— 1,000 dollars —						
Described in additional U.S. note 2 of chapter 12 and entered pursuant to its provisions:						
1202.10.40	20	For use as oil stock	9.35¢/kg	Free(A+,CA,E,IL,J)	(⁶)	0
1202.10.40	40	Other	9.35¢/kg	Free(A+,CA,E,IL,J)	(⁶)	0
Other:						
1202.10.80	20	For use as oil stock	163.8%	See 9908.12.01 (IL) See 9906.12.01-9906.12.03 (MX)	(⁶)	0
1202.10.80	40	Other	163.8%	See 9908.12.01 (IL) See 9906.12.01-9906.12.03 (MX)	(⁶)	1,271
Shelled, whether or not broken::						
Described in general note 15 of the tariff schedule and entered pursuant to its provisions:						
1202.20.05	20	For use as oil stock	6.6¢/kg	Free(A+,CA,E,IL,J,MX)	⁷ 10,148	0
1202.20.05	40	Other	6.6¢/kg	Free(A+,CA,E,IL,J,MX)	⁸ 127,356	0
Described in additional U.S. note 2 of chapter 12 and entered pursuant to its provisions:						
1202.20.40	20	For use as oil stock	6.6¢/kg	Free(A+,CA,E,IL,J)	(⁷)	0
1202.20.40	40	Other	6.6¢/kg	Free(A+,CA,E,IL,J)	(⁶)	36,633
Other:						
1202.20.80	20	For use as oil stock	131.8%	See 9908.12.01 (IL) See 9906.12.04-9906.12.06 (MX)	(⁷)	0
1202.20.80	40	Other	131.8%	See 9908.12.01 (IL) See 9906.12.04-9906.12.06 (MX)	(⁶)	1,495
Nuts, peanuts and other seeds, whether or not mixed together, otherwise prepared or preserved:						
Peanut butter and paste:						

See footnotes at end of table.

Table 8—Continued

Edible nuts: Harmonized Tariff Schedule subheadings; description¹; U.S. column 1 rate of duty as of Jan. 1, 2000; U.S. exports, 1999; and U.S. imports, 1999

HTS subheading	Suffix	Description	Column 1 rate of duty, as of Jan. 1, 2000		U.S. exports, 1999	U.S. imports, 1999
			General	Special ²		
— 1,000 dollars —						
208.11.02		Described in general note 15 of the tariff schedule and entered pursuant to its provisions	Free		⁹ 28,842	0
208.11.05		Described in additional U.S. note 5 of chapter 20 and entered pursuant to its provisions	Free		(⁹)	27,106
208.11.15		Other	131.8%	1.9¢/kg (MX)	(⁹)	1,212
Blanched peanuts:						
208.11.22		Described in general note 15 of the tariff schedule and entered pursuant to its provisions	6.6¢/kg	Free(A+,CA,E,IL,J,MX)	¹⁰ 22,025	16
208.11.25		Described an additional U.S. note 5 to chapter 20 and entered pursuant to its provisions	6.6¢/kg	Free(A+,CA,E,IL,J)	(¹⁰)	3,730
208.11.35		Other	131.8%	See 9908.12.01 (IL) See 9906.20.03-9906.20.05 (MX)	(¹⁰)	44
Other:						
208.11.42		Described in additional note 15 of the tariff schedule and entered pursuant to its provisions	6.6¢/kg	Free(A+,CA,E,IL,J,MX)	¹¹ 13,264	44
208.11.45		Described in additional U.S. note 5 to chapter 20 and entered pursuant to its provisions	6.6¢/kg	Free(A+,CA,E,IL,J)	(¹¹)	1,042
208.11.60		Other	131.8%	See 9908.12.01 (IL) See 9906.20.03-9906.20.05 (MX)	(¹¹)	271
Other, including mixtures:						
208.19.10	20	Brazil nuts	Free		192	45
208.19.10	40	Cashews	Free		3,406	21,562
208.19.15		Coconuts	1%	Free(A,CA,E,IL,J,MX)	¹² 7,072	19,455
208.19.20		Filberts	11.3¢/kg	Free(A+,CA,E,IL,J,MX)	(¹²)	1,177
208.19.25		Pecans	9.9¢/kg	Free(A,CA,E,IL,J,MX)	(¹²)	627
208.19.30	10	Pignolias	1¢/kg	Free(A*,CA,E,IL,J,MX)	23	55

See footnotes at end of table.

Table 8—Continued

Edible nuts: Harmonized Tariff Schedule subheadings; description¹; U.S. column 1 rate of duty as of Jan. 1, 2000; U.S. exports, 1999; and U.S. imports, 1999

HTS subheading	Suffix	Description	Column 1 rate of duty, as of Jan. 1, 2000		U.S. exports, 1999	U.S. imports, 1999
			General	Special ²		
— 1,000 dollars —						
208.19.30	20	Pistachios	1¢/kg	Free(A*,CA,E,IL,J,MX)	35,631	737
208.19.40		Almonds	32.6¢/kg	Free(A+,CA,E,IL,J,MX)	31,482	271
208.19.50		Watermelon seeds	6.4%	Free(A+,CA,E,IL,J,MX)	(¹²)	923
		Other, including mixtures:				
208.19.85		Mixtures	22.4%	Free(A+,CA,E,IL,J,MX)	10,016	475
		Other:				
208.19.90	10	Macadamia nuts	17.9%	Free(A,CA,E,IL,J,MX)	7,020	719
208.19.90	90	Other	17.9%	Free(A,CA,E,IL,J,MX)	(¹²)	3,399

¹ Some tariff descriptions have been condensed. For the precise legal tariff description see HTS Chapters 8, 12, and 20.

² Program 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,A+,A*); North American Free Trade Agreement; country of origin Canada (CA); Caribbean Basin Economic Recovery Act (E); United States-Israel Free Trade Area (IL); Andean Trade Preferences Act (J); and North American Free Trade Agreement, Country of origin Mexico (MX). The symbol "A+" in parenthesis indicates that all least-developed beneficiary countries of the Generalized System of Preferences are eligible for preferential treatment with respect to all articles provided for in the designated provision. The symbol "A" in parenthesis indicates that certain beneficiary countries may not be eligible for preferential treatment with regard to certain articles provided for in the designated provisions.

³ Exports under Schedule B subheading 0801.19.00 correspond to imports under HTS subheading 0801.19.00.20 and 0801.19.00.40.

⁴ Exports under Schedule B subheading 0802.90.91 correspond to imports under HTS subheadings 0802.90.20, 0802.90.80.10, and 0802.90.80.90.

⁵ Exports under Schedule B subheading 0802.90.95 correspond to imports under HTS subheadings 0802.90.25, 0802.90.94, 0802.90.98.10, and 0802.90.98.90.

⁶ Exports under Schedule B subheading 1202.10.05.20, 1202.10.05.40, 1202.10.40.20, 1202.10.40.40, 1202.10.80.20, and 1202.10.80.40 correspond to imports under HTS Subheadings 1202.10.05.20, 1202.10.05.40; 1202.10.40.20, 1202.10.40.40, 1202.10.80.20, and 1202.10.80.40.

⁷ Exports under Schedule B subheading 1202.20.00.20 correspond to HTS subheadings 1202.20.05.20, 1202.20.40.20, and 1202.20.80.20.

⁸ Exports under Schedule B subheading 1202.20.00.40 correspond to HTS subheadings 1202.20.05.40, 1202.20.40.40, and 1202.20.80.40.

⁹ Exports under Schedule B subheading 2008.11.10 correspond to HTS subheadings 2008.11.02, 2008.11.05, and 2008.11.15.

¹⁰ Exports under Schedule B subheading 2008.11.20 correspond to HTS subheading 2008.11.22, 2008.11.25, and 2008.11.35.

¹¹ Exports under Schedule B subheading 2008.11.90 correspond to HTS subheadings 2008.11.42, 2008.11.45, and 2008.11.60.

¹² Exports under Schedule B subheading 2008.19.95 correspond to HTS subheadings 2008.19.15, 1008.19.20, 2008.19.25, and 2008.19.50.

Source: U.S. Department of Commerce.

On October 23, 1997, at the request of the Committee on Finance, United States Senate, the Commission instituted investigation No. 332-386, *Macadamia Nuts: Economic and Competitive Conditions Affecting the U.S. Industry*, under section 332(g) of the Tariff Act of 1930 (19 U.S.C.) 1332(g)). The Committee requested the Commission to provide them with a description of the competitive factors affecting the domestic macadamia nut industry, including competition from imports; a description of the prices U.S. consumers pay for macadamia nuts compared with the prices paid by consumers in other major markets; a description of the degree to which quotas, tariffs, and other trade barriers affect such prices; a description of the extent to which trade practices and barriers by other competing countries are impeding the marketing of domestically produced macadamia nuts; and an analysis of current conditions of trade in macadamia-nut-exporting countries and between the United States and macadamia-nut-exporting countries and the rest of the world.²⁰ The Commission reported the results of its investigation on September 30, 1998.

U.S. Exports

The principal U.S. exporters of edible nuts are believed to include some multinational food processors and distributors; integrated agricultural cooperatives (e.g. Blue Diamond); food wholesalers; and retailers. The majority of U.S. exports of peanuts are believed to be accounted for by a relatively small group of peanut shellers in the major peanut-producing regions. Likewise, the majority of U.S. exports of tree nuts are believed to be accounted for by a small number of processors in California (almonds, walnuts, pistachios), Georgia and Texas (pecans), Hawaii (macademias), and Oregon (hazelnuts).

The demand for U.S. exports of edible nuts is a function of growing world population, rising income in foreign markets, and marketing and promotional activities by the U.S. industry to develop markets. The National Peanut Council of America participates in trade shows throughout the world to promote U.S. peanuts. Blue Diamond Almond Growers is a major promoter of tree nuts throughout the world, attending trade shows and food fairs. Sun Diamond is also an important promoter of nuts, primarily walnuts.

The value of U.S. edible nut exports increased from \$1.5 billion in 1995 to \$1.7 billion in 1996, before declining to \$1.2 billion in 1999 (table 9). The quantity of U.S. exports decreased steadily from 915 million pounds in 1995 to 705 million pounds in 1999. The principal U.S. export markets have been the European Union (primarily Germany, the Netherlands, and Spain), Japan, and Canada. During this period, the bulk of U.S. edible nut exports were almonds and peanuts. U.S. exports of edible nuts were important to the U.S. industry over the last decade and are becoming even more so. Exports were equivalent to 48 percent of domestic production in 1999. Exports of tree nuts accounted for 82 percent of the value of edible nut exports in 1999. The majority of U.S. tree nut exports (55 percent) consist of shelled almond for use in confectionery and bakery products. Shelled walnuts, and in-shell walnuts were the second-leading and third-leading tree nut exports in 1999 accounting for 8 percent and 7 percent, respectively of such exports. U.S. exports of peanuts accounted for 18 percent of edible nut exports and consist almost entirely of high quality

²⁰ USITC, *Macadamia Nuts: Economic and Competitive Conditions Affecting the U.S. Industry*, Investigation No. 332-386, USITC publication 3129, Oct. 1998.

edible peanuts for use as roasted in-shell peanuts or shelled peanuts for use in confectionery and bakery products. Approximately 5 percent of U.S. exports of peanuts are intended to be used as oil stock. The United States is a net exporter of peanuts. Such imports as do occur are primarily motivated by the high U.S. market price associated with the domestic price support program. The U.S. edible-nut processing industry is a world leader in processing and product quality and its products are recognized worldwide for their high quality.

Foreign Trade Measures

Tariff

In general, international rates of duty applicable to edible nuts are low, even for value-added products such as prepared or preserved peanuts and prepared or preserved tree nuts. U.S. exports of edible nuts go primarily to the EU, Canada, and Japan. Foreign tariffs on edible nuts in these major foreign markets are summarized in table 10.

Tariffs in the EU are relatively low for edible nuts, with imports of fresh or dried tree nuts and nut meats subject to duties ranging from free to a high of 6.1 percent ad valorem. Imports of peanuts, not roasted or otherwise cooked, enter free of duty. Mixtures of nuts are subject to duties ranging from 4.7 percent to 6.9 percent ad valorem. Peanuts, tree nuts, and other seeds that are cooked, roasted, or otherwise prepared or preserved are subject to duties ranging from 11.7 percent to 15.2 percent ad valorem for peanuts and 8.2 percent-13.9 percent for other nuts and seeds. These rates of duty are the result of reductions under the URA. Most edible nut duties were reduced by 25 percent. The lower duties increased the competitiveness of the U.S. and other foreign producers in the EU market.

U.S. shipments of edible nuts to Canada and Mexico have been free of duty since NAFTA was implemented by the United States, Canada, and Mexico on January 1, 1994.

Edible nut duties in Japan have been declining since the implementation of the URA. Rates of duty are scheduled to be reduced by 50 percent or more over the implementation period. The lower rates of duty have increased the competitiveness of tree nuts in the Japanese market. Import duties for the major edible nuts, fresh or dried, range from free to 13.3 percent ad valorem²¹ except for peanuts which range from free to ¥635.7/kg (\$5.57/kg).²² Duties on value-added products range from 5 percent to 24.5 percent.

Nontariff

U.S. edible nut exports are subject to various nontariff measures related to health requirements and labeling issues. These measures are not considered a significant impediment to trade by U.S. exporters.

²¹ Tariff information for Japan was obtained from the Asia Pacific Economic Cooperation (APEC) tariff database, found at <http://www.apectariff.org>, retrieved Feb. 28, 2000.

²² Based on 113.91 yen per dollar at the end of 1999.

Table 9

Edible nuts: U.S. exports of domestic merchandise, by leading markets, 1995-99

Source	1995	1996	1997	1998	1999
<i>1,000 pounds</i>					
Canada	230,414	220,405	233,084	219,779	222,394
Germany	211,517	215,157	151,065	146,006	117,143
Japan	127,418	120,975	85,142	72,950	80,564
Spain	120,075	162,251	97,578	102,239	116,398
Netherlands	208,264	152,734	172,583	141,193	138,637
Mexico	61,784	86,778	92,625	86,776	111,935
United Kingdom	132,097	103,247	102,541	81,455	84,670
Hong Kong	34,561	32,612	38,751	31,384	41,156
India	27,276	22,877	33,922	35,262	38,909
France	55,537	49,952	50,261	45,352	36,257
All other	719,681	609,841	507,078	482,618	103,050
Total	915,399	855,354	774,917	717,495	705,349
<i>1,000 dollars</i>					
Canada	152,797	161,020	166,564	164,300	167,451
Germany	252,987	302,552	224,982	211,096	146,110
Japan	164,548	176,887	152,940	126,513	117,268
Spain	114,525	158,238	97,025	122,548	115,774
Netherlands	118,287	128,253	125,611	116,807	102,558
Mexico	34,514	48,087	51,121	52,222	67,217
United Kingdom	90,717	99,109	81,488	75,778	65,784
Hong Kong	46,000	51,170	61,736	45,833	46,911
India	25,946	25,768	44,819	51,444	41,432
France	61,617	71,568	73,889	64,303	40,893
All other	400,434	443,435	410,459	360,662	301,048
Total	1,462,372	1,666,087	1,490,634	1,391,506	1,212,446
<i>Unit value (dollars)</i>					
Canada	\$0.66	\$0.73	\$0.71	\$0.75	\$0.75
Germany	1.20	1.41	1.49	1.45	1.25
Japan	1.29	1.46	1.80	1.73	1.46
Spain	0.95	0.98	0.99	1.20	0.99
Netherlands	0.57	0.84	0.73	0.83	0.74
Mexico	0.56	0.55	0.55	0.60	0.60
United Kingdom	0.69	0.96	0.79	0.93	0.78
Hong Kong	1.33	1.57	1.59	1.46	1.14
India	0.95	1.13	1.32	1.46	1.06
France	1.11	1.43	1.47	1.42	1.13
All other	0.56	0.73	0.81	0.75	2.92
Average	1.50	1.95	1.92	1.94	1.72

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

Table 10

Applied edible nut tariffs for major trading partners by country and HTS subheading, 1999

HTS subheading	Description	Applied tariff levels, 1999			
		EU-15	Canada	Japan	Mexico
	Coconuts:				
0801.11	Desiccated	Free	Free	3.5%	Free
0801.19	Other	Free	Free	3.5%	Free
	Brazil nuts:				
0801.21	In-shell	Free	Free	3.5%	Free
0801.22	Shelled	Free	Free	3.5%	Free
	Cashews:				
0801.31	In-shell	Free	Free	Free	Free
0801.32	Shelled	Free	Free	Free	Free
	Other nuts:				
	Almonds:				
0802.11	In-shell	Free-6.1%	Free	Free-2.7%	Free
0802.12	Shelled	Free-4.7%	Free	Free-2.7%	Free
	Hazelnuts or filberts:				
0802.21	In-shell	3.3%-3.5%	Free	6.7%	Free
0802.22	Shelled	3.3%-3.5%	Free	6.7%	Free
	Walnuts:				
0802.31	In-shell	4.7%-5.3%	Free	10%	Free
0802.32	Shelled	5.6%-6.1%	Free	10%	Free
0802.40	Chestnuts	5.8%-6.1%	Free	10.7%	Free
0802.50	Pistachios	1.7%	Free	Free	Free
0802.90	Other	Free-3.5%	Free	Free-13.3%	Free
0803.50	Mixtures of nuts or dried fruit of chapter 8	4.7%-6.9%	Free	6.7%-13.3%	Free
	Peanuts, not roasted or otherwise cooked:				
1202.10	In-shell	Free	Free	Free to ¥635.17/kg	Free
1202.20	Shelled	Free	Free	Free to ¥635.17/kg	Free
	Nuts, peanuts, and other seeds, whether or not mixed together otherwise prepared or preserved:				
2008.11	Peanuts	11.7%-15.2%	Free	10%-24.5%	Free
2008.19	Other	8.2%-13.9%	Free	5%-23.3%	Free

Source: Tariffs for the EU are from the *Official Journal of the European Union*. Tariffs for Canada and Mexico are those specified in the NAFTA for 1999. Tariffs for Japan are from the tariff schedule posted by the APEC Secretariat, found at <http://www.apectariff.org>.

FOREIGN INDUSTRY PROFILE

Overview of World Market

The production of edible nuts is concentrated in a relatively few countries, depending on the type of nut. Major world production of tree nuts is in the United States, India, Iran, Turkey, and China. China, India, and the United States are the major world producers of peanuts.²³ However, the majority of the output of peanuts except in the United States is used to produce peanut oil and peanut meal that are included in another summary.²⁴

Tree Nuts

Almonds

The United States and Spain are the two largest producers of almonds. Spain, the largest producer after the United States, accounted for 10 to 20 percent of world output during 1995/96-1999/00 (table 11). Other producers of note are Greece, Turkey, and Italy. The Spanish industry is primarily in the Mediterranean regions and consists of many small groves. The Spanish almond industry is characterized as small scale, unmechanized, unirrigated, family labor oriented, and a secondary source of income for most producers. Compared with the Spanish industry, the U.S. industry is large-scale, highly mechanized, and irrigated.

Spain

Spanish production of almonds increased irregularly over the last 5 years, and peaked at 165 million pounds (shelled basis) in 1997/98. The increasing maturity (higher yields) from acreage planted in the 1970s and 1980s is the principal factor contributing to increased production. In 1998/99, production declined sharply to 66 million pounds because of dry weather and the biennial bearing characteristic of almonds. Production is estimated to recover in 1999/00 to 146 million pounds.

Spain exports from one-half to three-quarters of its annual production. Exports are forecast at 110 million pounds in 1999/00. Most of the exports are to other EU countries. In some years, Spain is an importer of almonds. In 1999/00, it is estimated by the U.S. Department of Agriculture that Spain will import nearly 44 million pounds (shelled basis) of almonds. In 1998/99, the United States accounted for 89 percent of Spain's imports. U.S. almonds are generally preferred by slice and flour processors in Spain because of their uniformity and

²³ USDA, FAS, "World Agricultural Production," Sept. 1999, p. 24.

²⁴ USITC, Industry & Trade Summary, *Animals and Vegetable Fats and Oils*, USITC publication 2631, May 1993.

Table 11
Almonds: Production and exports, by major producing countries, marketing years 1994/95-1999-00¹

Countries	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 ²
————— Million pounds, shelled basis —————						
Production:						
United States	735	370	510	759	520	630
Spain	155	100	132	165	66	146
Italy	29	33	13	24	20	37
Greece	35	29	28	32	26	32
Turkey	35	30	32	24	27	29
Total	989	562	715	1,004	659	1,074
Exports:						
United States	448	335	396	453	405	467
Spain	72	52	74	112	90	110
Greece	4	2	1	3	3	4
Italy	3	4	2	3	2	2
Turkey	(³)	1	1	(³)	(³)	(³)
Total	527	394	474	571	501	584

¹ Marketing years: Aug.-July for the United States; Sept.-Aug. for Spain, Italy, and Turkey; and Oct.-Sept. for Greece.

² Forecast by USDA.

³ Less than 500,000 pounds.

Source: USDA, FAS, *World Horticultural Trade and U.S. Export Opportunities*, various issues.

low breakage. Spanish nougat²⁵ manufacturers reportedly prefer Spanish almonds because U.S. almonds have less flavor and less oil content.²⁶ The EU maintains a tariff rate quota on shelled almonds of 2 percent ad valorem for the first 90,000 metric tons. The overquota rate of duty is 4.1 percent ad valorem.

Greece

During 1994/95-99/00, Greece's production of almonds ranged from a high of 35 million pounds (shelled basis) in 1994/95 to a low of 26 million pounds in 1998/99. Production is forecast to increase to 32 million pounds in 1999/00. The area planted to almonds declined steadily during the early and mid-1990s as farmers replaced poorly producing trees with higher yielding varieties and cold-tolerant varieties. Hence, almond production is not expected to exceed 33 million pounds over the next 3 to 5 years.²⁷

²⁵ Nougat is a paste like confection containing almonds or other nuts.

²⁶ USDA, FAS, *Spain, Tree Nuts, Almonds and Filberts 1999*, GAIN Report SP9044, Aug. 1999, p. 2.

²⁷ USDA, FAS, *Greece, Tree Nuts, Annual Report 1999*, GAIN Report GR9018, Aug. 1999, p. 2.

Greece's domestic consumption of almonds is approximately 29 million pounds annually. Almond meats are used in the confectionery and chocolate industry and in the snack food industry. Greece has one of the highest per capita consumption ratios for tree nuts in the world at over 11 pounds per year, with almonds accounting for about one-quarter.²⁸

Greece is both an importer and an exporter of almonds. In 1998/99, the last year complete data are available, imports amounted to 6 million pounds, mostly from the United States and Spain, while exports amounted to nearly 4 million pounds, mostly to other EU countries. Imports are used primarily by the confectionery and chocolate industries.

Italy

It is estimated by the USDA that Italy accounted for about 4 percent or 37 million pounds (shelled basis) of world almond production in 1999/00. Adverse weather reduced the 1996/97-98/99 crops from historical levels of 30 million pounds, annually.²⁹ Italy's output has also been impacted by the uprooting of old, less productive trees. No significant new orchards have been planted in recent years, except for some minor plantings in Sicily.³⁰

Italy had been a major exporter of almonds but is now a net importer. Italy exports just over 2 million pounds of almonds annually, primarily to other EU countries. During 1994/95-99/00, Italy's almond imports ranged from a low of 20 million in 1995/96 and 1999/00 to a high of 35 million pounds in 1997/98. Spain and the United States were the principal import sources.

Turkey

Almonds are a minor nut crop in Turkey.³¹ During 1995/96-99/00, Turkey's production of almonds ranged from a high of 35 million pounds in 1994/95 to a low of 24 million pounds in 1997/98. Production is concentrated in the Aegean, Marmara, and Mediterranean regions.

Consumption of almonds is supplied primarily from domestic production. In 1999/00, domestic consumption is forecast at 30 million pounds (shelled basis). Almonds are used primarily as a snack food and are used in limited quantities in confectionery.

Trade in almonds is very limited and consists primarily of border trade. There are no taxes, subsidies or other restrictions on almond exports. Imports are subject to a 45.6 percent duty on the CIF value of the product.

²⁸ USDA, FAS, *Greece, Tree Nuts, Voluntary 1998*, GAIN Report GR8026, Sept. 1998, p. 3.

²⁹ USDA, FAS, *Italy, Tree Nuts, Annual Tree Nuts 1999*, GAIN Report IT9032, Sept. 1999, p. 8.

³⁰ Ibid.

³¹ USDA, FAS, *Turkey, Tree Nuts, Annual Tree Nuts Report 1999*, GAIN Report TU9035, p. 4.

Hazelnuts

Turkey and Italy are the major world producers of hazelnuts (table 12). Turkey is by far the largest producer accounting for 77 percent of estimated world production by major producers in 1999/00, followed by Italy with 15 percent. The United States is a distant third, accounting for 5 percent of world production, and Spain accounted for about 3 percent. Turkey is the principal world exporter of hazelnuts, accounting for 86 percent of exports by major world producer during 1994/95-99/00.

Turkey

Turkey's production of hazelnuts ranged from a low of 970 million (in-shell basis) in 1996/97 to a high of 1,378 million pounds in 1998/99. Hazelnut production is concentrated along the Black Sea and extending inland about 15-20 miles. The majority of Turkey's production is on small plots. There are only a few growers who produce 10 metric tons or more annually.

Turkey's domestic consumption of hazelnuts fluctuates widely from year to year and is supplied entirely from domestic production. Turkey's consumption is affected by production, export demand, the level of the government support price, and activities of the Union of Hazelnut Sales Cooperatives (FISKOBIRIL).³² Hazelnuts are primarily a snack food in Turkey and the bulk of domestic consumption consists of whole nuts.³³

Table 12
Hazelnuts: Production and exports, by major producing countries, marketing years 1994/95-99/00¹

Country	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 ²
<i>Million pounds, in-shell basis</i>						
Production:						
Turkey	1,157	992	970	1,047	1,378	1,235
Italy	265	187	210	170	260	232
United States	42	78	38	94	31	76
Spain	52	33	14	35	22	55
Total	1,516	1,290	1,232	1,346	1,691	1,598
Exports:						
Turkey	785	932	738	932	766	882
Italy	98	65	122	60	99	66
United States	26	34	36	56	25	33
Spain	15	11	17	26	15	31
Total	924	1,042	913	1,074	905	1,012

¹ Marketing years: July-June for the United States, and Sept.-Oct. for Spain, Italy, and Turkey.

² Forecast.

Source: USDA, FAS, Various issues of *World Horticultural Trade & U.S. Export Opportunities*.

³² There are about 216,000 growers who are members of FISKOBIRIL. FISKOBIRIL handles the majority of the Turkish filbert crop and accounts for about 50 percent of the world's exports.

³³ USDA, FAS, *Tree Nuts, Annual Report 1996*, AGR No. TU6040, p. 7.

Turkey accounts for the majority of the world's exports of hazelnuts. The EU is the major market for Turkish hazelnuts. The United States and Switzerland are also important secondary markets. About four-fifths of Turkey's hazelnut exports are comprised of raw kernels and the remaining one-fifth consists of processed kernels, including roasted, sliced, chopped, paste, meal, and flour. Turkey is trying to reduce raw exports and increase processed and finished products to capture increased value-added revenues.³⁴

The Government of Turkey imposes an export tax on hazelnuts. In 1998, the tax was US\$ 10 per 100 kilograms. There is a 46 percent import duty CIF basis on imports from all sources.³⁵

Italy

Italy is the second-most-import producer and exporter of hazelnuts. During 1994/95-99/00, Italy's filbert production ranged from a high of 265 million pounds (in-shell basis), in 1994/95 to a low of 170 million pounds in 1997/98. Production rebounded in 1998/99 to 260 million pounds and is forecast to decline to 232 million pounds in 1999/00. Production levels are affected by weather as well as the cyclical bearing habit of hazelnuts, as the acreage devoted to production is relatively stable.³⁶

From 1994/95 to 1999/00, consumption of hazelnuts in Italy increased irregularly from 209 million pounds, in-shell basis, to 254 million pounds. Hazelnuts are used by the confectionery industry, being the main ingredient in many chocolate products.³⁷ During 1994/95-99/00, Italy was a net exporter of hazelnuts in 1996/97 and 1998/99 and a net importer in marketing years 1994/95, 1995/96, 1997/98. Other EU countries are the principal destinations for Italian hazelnut exports. Italian imports of shelled hazelnuts are primarily from Turkey. There are also imports of in-shell hazelnuts from the United States.

Hazelnuts are subject to a 3.3 percent ad valorem duty on both in-shell and shelled product. Italian exporters are also eligible to receive export restitutions for shipments to third countries at a rate of 114 lire per kilogram (US\$0.066 per kilogram based on 1998 exchange rate of 1736.2 lira per dollar) for in-shell hazelnuts and 221 lire per kilogram (US\$.127 per kilogram) for shelled hazelnuts.³⁸

Macadamias

World production of macadamias increased dramatically over the last 6 years from 120 million pounds in 1994/95 and 1995/96 to a peak of 176 million pounds in 1998/99. World production is forecast to be unchanged in 1999/00 (table 13). Australia became the world's largest macadamia nut producer in 1998/99, replacing the United States.

³⁴ USDA, FAS, *Tree Nuts, Annual Report 1998*, AGR No. TU8037, pp. 9 and 10.

³⁵ *Ibid.*, pp. 11 and 12.

³⁶ USDA, FAS, *Italy, Tree Nuts, Annual Tree Nuts 1999*, GAIN Report IT9032, Sept. 1999, p. 5.

³⁷ *Ibid.*, p. 6.

³⁸ *Ibid.*, p. 6.

Table 13

Macadamias: Production and exports, by major producing countries, marketing years 1994/95-1999/00¹

Country	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
	<i>Million pounds, in-shell basis</i>					
Production:						
Australia	40	43	55	54	75	75
United States	53	51	56	58	58	53
South Africa	7	5	9	14	16	18
Kenya	9	9	11	9	14	13
Guatemala	5	5	6	6	6	9
Costa Rica	5	5	6	6	4	4
Brazil	2	2	3	4	4	4
Total	121	120	146	151	177	176
Exports:						
Australia	28	28	33	37	40	40
South Africa	6	5	8	12	8	17
Kenya	8	8	9	8	12	14
United States	8	11	10	7	8	7
Guatemala	5	4	4	6	6	8
Costa Rica	4	3	5	7	3	4
Brazil	0	1	1	1	3	3
Total	59	60	70	78	80	93

¹ Marketing years: July-June for the United States and Australia; Jan.-Dec. for Kenya, South Africa, Costa Rica, and Guatemala; and Feb.-Jan. for Brazil.

Note.—Totals may not add due to rounding.

Source: USDA, FAS, various issues of *World Horticultural Production and Trade, Macadamia Situation and Outlook*.

Australia

During 1994/95-99/00, production of macadamias increased dramatically in Australia from 40 million pounds in 1994/95 to a record 75 million pounds in 1998/99 and is forecast to remain unchanged in 1999/00. Production of macadamia nuts is primarily in New South Wales and Queensland on the eastern coast of Australia.

In recent years, Australia's macadamia nut industry has become export oriented. During 1995/96-1999/00, exports were equivalent to between 53 percent and 65 percent of production. In 1998/99 and 1999/00, exports were estimated at 40 million pounds. The United States was Australia's principal market, followed by Asia.

South Africa

South Africa was the third-largest producer of macadamia nuts in the world in 1999/00, accounting for 10 percent of world production. During 1994/95-99/00, production ranged from a low of 7 million pounds in 1995/96 to a high of 18 million pounds in 1999/00. The rise in production reflects favorable weather and trees reaching full production.

During 1994/95-99/00, exports of South Africa macadamia nuts increased from 6 million pounds to an estimated 17 million pounds. The United States and Europe were the principal markets, accounting for 59 percent and 29 percent, respectively, of total exports in 1998/99.³⁹

Kenya

Production of macadamias increased steadily in Kenya from 9 million pounds in 1994/95 to 14 million pounds in 1998/99. Production declined in 1999/00 to 13 million pounds because of premature nut harvest and bad weather. Farmers in Kenya inter-plant macadamia trees in their coffee and tea plantations. They view the macadamia crop as insurance against the uncertainties of weather, which affect coffee and tea significantly more.⁴⁰ Production is expected to increase as trees planted in 1992-94 begin bearing nuts. Domestic production supplies almost all of Kenya's domestic consumption.

Kenya's exports of macadamias were estimated at a record 14 million pounds in marketing year 1999/00.⁴¹ The United States and Japan are the two largest markets, accounting for nearly 90 percent of Kenya's total exports.

Guatemala

Macadamia nut production in Guatemala increased from 5 million pounds in 1994/95 to 9 million pounds in 1999/00. Production is expected to continue to increase as existing trees reach maturity.⁴² Guatemala consumes very little of its own production.

Guatemala's exports of macadamias totaled over 8 million pounds in 1999/00. The United States is traditionally the destination for 80 percent of the exports, and the EU accounts for about 10 percent of exports.

Costa Rica

During 1994/95-99/00, macadamia nut production remained almost unchanged, ranging from a low of 4 million pounds in 1998/99 and 1999/00 to highs of 6 million pounds in 1996/97 and 1997/98. Production in 1999 was reduced because of adverse weather conditions caused by El Niño and low prices. Exports totaled 4 million pounds in 1999/00. The United States and the European Union are Costa Rica's principal export markets.

³⁹ USDA, FAS; GAIN Report No. SF0005; *Tree Nuts—Macadamia Nuts—Republic of South Africa*, prepared by the U.S. Embassy staff, Nairobi, Jan. 27, 2000.

⁴⁰ USDA, FAS, *Macadamia Situation and Outlook*, found at <http://www.fas.usda.gov/htp2/circular/1998/98-03/9803maca.html>, retrieved Jan. 24, 2000.

⁴¹ USDA, FAS; *Tree Nuts—Macadamia Nuts—Republic of South Africa*.

⁴² *Ibid.*

Brazil

Brazil's output of macadamias increased steadily from 2 million pounds in 1994/95 to over 4 million pounds in 1999/00. Production is expected to increase as trees mature. The United States and the European Union account for nearly all of Brazil's exports of macadamias, which totaled 3 million pounds in 1999/00.

Pecans

Pecan production by the major world producers ranged from a high of 439 million pounds (in-shell basis) in 1999/00 to a low of 254 million pounds in 1998/99 (table 14). The large swings in output are the result of the alternate-bearing cycle in pecan trees and weather conditions. Mexico is the only major world producer of pecans other than the United States, although pecans are produced in South America, South Africa, and Australia.

Table 14
Pecans: Production and exports, by major producing countries, marketing year 1994/95-1999/00¹

Country	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
	<i>Million pounds, in-shell basis</i>					
United States	199	268	210	335	146	325
Mexico	87	101	97	97	108	114
Total	286	369	307	432	254	439
Exports:						
United States	17	25	25	25	25	(²)
Mexico	46	46	56	36	65	66
Total	63	71	81	61	90	(²)

¹ Marketing years: Oct.-Sept. for Mexico and United States.

² Not available.

Source: USDA, NASS, various issues of *Noncitrus Fruits and Nut Summary*; USDA, FAS, *Mexico Tree Nuts*, GAIN report #MX9111 and MX8085, AGR Nos. MX7070 and MX6106.

Mexico's production of pecans increased gradually during 1994/95-99/00 from 87 million pounds in 1994/95 to 114 million pounds in 1999/00 because trees that were planted in the late 1980s and early 1990s (in response to favorable export prices) are reaching bearing age.

Mexico is a net exporter of pecans. Almost all exports are to the United States. The majority of the exports are of in-shell pecans. The bulk of Mexico's exports and consumption are in the fall and winter since there is not sufficient cold storage in most years in Mexico to hold the entire crop. The quality of pecans decreases rapidly if they are not held in cold storage. Mexican growers usually prefer to sell their highest quality pecans to the export market because of the higher prices and because they receive payment on delivery. Mexico then imports pecans from the United States if there is a need to meet domestic demand. Imports from the United States are exempt from duty under NAFTA.

Pistachios

Major world producers of pistachios include Iran, the United States, Turkey and Syria. During 1994/95-99/00 world production by major producers (excluding Iran) increased irregularly from 246 million pounds in 1994/95 to 344 million pounds in 1998/99 (table 15). Production declined by 24 percent in 1999/00, primarily because of decreased output in the United States. U.S. output declined because of bad weather and the alternate bearing habit of pistachios. Although official statistics are not available, it is believed that Iran is the world's largest producer, with output ranging from 300 million to 400 million pounds, annually.⁴³ Iran is also a major world exporter of pistachios with the majority of its exports going to other Middle-Eastern countries and the EU. On May 3, 2000,⁴⁴ the United States announced that economic sanctions against Iran would be eased to allow Americans to purchase and import certain food stuffs including nuts.⁴⁵

Table 15
Pistachios: Production and exports, by major producing countries, marketing years
1994/95-1999/00¹

Country	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
<i>Million pounds, in-shell basis</i>						
Production:						
United States	148	105	105	180	188	122
Syria	32	33	54	65	79	84
Turkey	66	66	110	88	77	55
Total	246	204	269	333	344	261
Exports:						
United States	51	63	64	69	58	(²)
Syria	(²)	7	18	27	35	³ 33
Turkey	14	7	12	11	4	³ 2
Total	(²)	77	94	107	97	(²)

¹ Marketing years: Oct.-Sept. for Turkey and United States.

² Not available.

³ Forecast.

Source: USDA, NASS, various issues of *Noncitrus Fruits and Nut Summary*; USDA, FAS, *Mexico Tree Nuts*, GAIN Report MX9111 and MX8085, AGR Nos MX7070 and MX6106.

The United States is the second-largest producer followed by Syria, Turkey, Greece, and Italy. Production in Greece ranges from 8-10 million pounds, annually and that in Italy ranges from less than 500,000 pounds to 11 million pounds. Neither Greece or Italy is a major exporter of pistachios.

⁴³ USDA, FAS, *Pistachio Situation and Outlook*, found at <http://fas.usda.gov/http/circular/1997/97-11/pistachi.htm>, retrieved Nov. 4, 1998

⁴⁴ *Federal Register*, Wed., May 3, 2000, 25642.

⁴⁵ The sanctions were imposed by Executive Order No. 12613 on Oct. 29, 1987.

Syria

Pistachio production in Syria has increased steadily from 32 million pounds in 1994/95 to 84 million pounds in 1999/00. Production is expected to increase as young trees reach maturity. Most of Syria's production is consumed as green (not roasted) pistachios in Syria.⁴⁶

Syria's exports of pistachios have increased steadily from 7 million pounds in 1995/96 to a high of 35 million pounds in 1998/99. Most of Syria's exports are to other Arab countries.⁴⁷ A large share of these exports are of green pistachios.

Turkey

During 1994/95-99/00, Turkey's production of pistachios ranged from a low of 55 million pounds in 1999/00 to a high of 110 million pounds in 1996/97. Production totaled 55 million pounds in 1999/00. Turkey's production is quite variable and in recent years has been adversely impacted by weather and pest.⁴⁸ Turkey consumes most of its own production. Exports are a residual after domestic consumption is satisfied. The EU is the principal market. Imports of pistachios are small and come primarily from Iran.

Walnuts

Walnut production in major foreign producing countries rose irregularly over the period 1994/95-99/00 from 1.2 billion pounds in 1994/95 to 1.5 billion pounds in 1999/00 (in-shell basis). China and the United States are the largest producers, together accounting for about three-quarters of world output, annually.

China

During 1994/95-99/00, China's production of walnuts increased steadily from 463 million pounds to 573 million pounds. The majority of China's production is consumed internally.⁴⁹ However, China's exports of walnuts are significant, ranging from 68 million pounds in 1999/00 (in-shell basis) to 110 million pounds in 1996/97. China's exports are expected to increase only slightly due to strong demand in the domestic market (table 16).⁵⁰

⁴⁶ USDA, FAS, *Pistachio Annual Report*, Syria, GAIN Report No. SY9005, Sept. 1, 1999, p. 2.

⁴⁷ *Ibid.*, p. 3.

⁴⁸ USDA, FAS, *Annual Tree Nuts Report*, Turkey, GAIN Report No. TU903J, Aug. 24, 1999, p. 3.

⁴⁹ USDA, *World Horticultural Trade & U.S. Export Opportunities*, Nov. 1995, p. 33.

⁵⁰ USDA, FAS, *Walnut Situation and Outlook, 1999*, found at <http://www.fas.usda.gov/htp2/circular/1999/99-11/walnut.htm>.

Table 16

Walnuts: Production and exports, by major producing countries, marketing years 1994/95-1999/00¹

Country	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00 ²
<i>Million pounds, in-shell basis</i>						
China	463	509	525	549	550	573
United States	464	468	416	538	454	560
Turkey	146	143	146	146	154	154
India	62	55	64	55	66	62
France	64	48	49	52	54	52
Chile	19	22	24	22	25	22
Italy	20	35	26	46	26	40
Total	1,239	1,280	1,249	1,405	1,333	1,463
United States	230	233	251	229	220	243
China	86	87	110	70	60	68
France	29	26	31	33	35	36
India	37	36	30	21	31	33
Chile	17	18	20	19	22	19
Italy	2	4	2	2	2	2
Turkey	2	1	2	2	1	1
Total	403	405	446	375	370	402

¹ Marketing year begins Mar. 1 for Chile, Aug. 1 for the United States, Sept. 1 for Italy and Turkey, and Oct. 1 for China, France, and India.

² Forecast by USDA.

Note.—Totals may not add due to rounding.

Source: USDA, FAS, *World Horticultural Trade & U.S. Export Opportunities*, Oct. 1996, Nov. 1999, and Mar. 2000.

Domestic walnuts are readily available to Chinese consumers, and prices have remained fairly constant due to increases in production. Market reforms and strong domestic demand allow retailers to compete favorably with exporters.⁵¹

Turkey

Turkey is also a producer of note averaging about 154 million pounds (in-shell) annually in recent years. Virtually all of the Turkish crop is consumed domestically. Growers use about one-half of the crop at home with the remainder being sold for commercial consumption.⁵²

⁵¹ USDA, FAS, *World Horticultural Trade & U.S. Export Opportunities*, Nov. 1995, p. 33.

⁵² *Ibid.*

India

Production of walnuts in India remained relatively stable during 1994/95-99/00, ranging from 55 million to 66 million pounds. Traditionally, India consumes about 50 to 60 percent of its output and exports the remainder. Major export markets are the EU, Egypt, and the United States.⁵³ There are few import opportunities because of high tariffs and surplus domestic production.

France

France's output of walnuts decreased from 64 million pounds in 1994/95 to 48 million pounds in 1995/96 because of poor weather. Production has increased since then and totaled 52 million pounds in 1999/00. France is both a major exporter and importer of walnuts. During 1994/95-99/00, exports ranged from 29 million pounds, in 1994/95 to a high of 36 million pounds in 1999/00. Other EU countries were the principal markets for French exports. French imports increased irregularly from 18 million pounds in 1994/95 to 25 million pounds in 1996/97. The level of French imports is dependent on the size of the domestic crop and export demand in the EU.⁵⁴ The United States is France's principal source of in-shell walnuts. Traditionally, France's principal source for shelled walnuts was China, but has recently shifted to Moldova, due to lower costs, shorter transit time, and better quality.⁵⁵

Other tree nuts

Cashews

World production of cashews totaled nearly 2 billion pounds in 1998 (the last year data are available), down from a peak of 2.3 billion pounds in 1996 (table 17). India is by far the largest producer of cashews, accounting for 20-47 percent of the world's annual production. India's production totaled 948 million pounds in 1998. Brazil traditionally has been the second-largest producer. However, Brazil's production declined from 249 million pounds in 1997 to 99 million pounds in 1998.

India and Brazil are the world's largest exporter of cashews, accounting for approximately 60 percent and 30 percent, respectively, of world exports annually. The United States is the principal world importer, accounting for 40 to 50 percent of imports, annually.

⁵³ USDA, FAS, *World Horticultural Trade & U.S. Export Opportunities*, Nov. 1999, p. 42.

⁵⁴ USDA, FAS, *Walnut Situation and Outlook*, 1997, found at <http://www.fas.usda.gov/htp2/circular/1977/97-11/walnut2.htm>.

⁵⁵ USDA, FAS, *Walnut Situation and Outlook*, 1999, found at <http://www.fas.usda.gov/htp2/circular/1999/99-11/walset.htm>.

Table 17**Cashews: World production, by major producing countries, 1995-98¹**

Country	1995	1996	1997	1998
	<i>Million pounds</i>			
India	331	922	948	948
Tanzania	139	181	148	154
Indonesia	165	150	148	152
Viet Nam	176	154	132	117
Brazil	408	364	249	99
All other	448	561	509	530
Total	1,667	2,332	2,134	2,000

¹ Data are not available for 1999.

Source: Food and Agriculture Organization of the United Nations. FAO Yearbook Production, 1997 and 1998.

Brazil nuts

During 1995-97, world production of Brazil nuts ranged from 60 million pounds in 1995 to 140 million pounds in 1997 (table 18). Brazil and Bolivia account for the majority of world production in most years. In 1997, these two countries accounted for 87 percent of world output. Brazil and Bolivia also account for the majority of the world's exports of Brazil nuts. The European Union and the United States are the principal world importers, accounting for approximately 90 percent of imports, annually.

Table 18**Brazil nuts: World production, by major producing countries, 1995-99**

Country	1995	1996	1997	1998	1999
	<i>Million pounds</i>				
Brazil	8	66	88	(¹)	(¹)
Boliva	34	34	34	(¹)	(¹)
All other	18	18	18	(¹)	(¹)
Total	60	118	140	(¹)	(¹)

¹ Not available.

Source: United Nation, Food and Agriculture Organization, Yearbook, various issues.

Peanuts

China and India dominate world production of peanuts (table 19), accounting for two-thirds of world output during 1995/96-1999/00. The United States was the third-largest producer, accounting for 6 percent of production over the period. The majority of the peanut output in China and India is used in the production of peanut oil and peanut meal, whereas peanut output in the United States is primarily used for human consumption either directly in snacks or in further processed foods.

Table 19

Peanuts: Production and exports, by major producing countries, marketing years 1995/96-1999/00¹

Country	1995/96	1996/97	1997/98	1998/99	1999/00 ²
	<i>Million pounds</i>				
Production:					
China	22,487	22,355	21,182	26,204	26,455
India	16,314	19,894	16,711	16,424	17,637
United States	3,461	3,662	3,538	3,964	3,695
Argentina	1,014	661	1,653	1,378	750
All other	16,561	16,325	15,631	15,699	16,693
Total	59,837	62,897	58,715	63,669	65,230
Exports:					
China	771	937	386	771	661
India	198	331	331	88	110
United States	825	666	681	624	800
Argentina	661	331	716	641	331
All other	1,200	1,165	1,332	1,214	1,630
Total	3,655	3,430	3,446	3,338	3,532

Note.—Data on production and exports include peanut for all use. Data are not available for peanuts used for food uses except for the United States.

Source: USDA, FAS, *Oilseeds: World Markets and Trends*, July 1999, p. 14; USDA, FAS, *Argentina Oilseeds and Products, September Oilseed Update 1999*, GAIN Report AR 906, Sept. 1999, p. 3.

World peanut production for all uses irregularly increased from 60 billion pounds in 1995/96 to 65 billion pounds in 1999/00. Weather in major producing areas was the principal factor affecting production over the period. In addition, relatively higher prices for peanuts compared to other crops, has encouraged farmers to plant additional acreage in peanuts, particularly in China.⁵⁶

World trade in peanuts is relatively minor since the major producers are also the major consumers of peanuts and peanut products. In 1999, just over 5 percent of world production was exported. The United States, China, and Argentina are the principal exporters of peanuts, accounting for 50 percent of world exports. The majority of the exports by the United States, China, and Argentina are believed to be edible peanuts. Table 18 shows domestic consumption of edible peanuts by major exporter for 1995/96-99/00.

China

China is the world's largest producer of peanuts and the largest producer of peanuts for food use. China supplies all of its domestic consumption of peanuts for food use from domestic production. Domestic consumption ranged from 5.5 billion pounds in 1995/96 and 1996/97 to 6.2 billion pounds in 1999/00. Food use of peanuts is expected to continue to increase as

⁵⁶ USDA, FAS, *Oilseeds: World markets and Trade*, July 1999, p. 13.

peanuts are increasingly popular as ingredients in snack foods.⁵⁷ Since January 1998, wholesale peanut prices in China have fallen by roughly one-third.

China is a major world exporter of peanuts; the majority of these peanuts are edible peanuts. During the period 1995/96-1999/00, Chinese exports of peanuts have ranged from 386 million pounds to 937 million pounds. In recent years exports of shelled peanuts and peanut butter have shown the fastest growth. In addition to low prices, partial recovery in Asian markets has also helped support exports. The EU is the largest market for Chinese peanuts.⁵⁸

Argentina

Argentina is a major world producer and exporter of peanuts. Production ranged from 661 million pounds in 1996/97 to 1,653 million pounds in 1997/98. Peanut usage in Argentina is very low, averaging about 44 million pounds annually. However, Argentina's exports are significant in most years. Over the period 1995/96-99/00, Argentina exports of peanuts range from 331 million pounds to 716 million pounds (table 19). The United States, Canada, and the EU are Argentina's principal markets.

⁵⁷ USDA, FAS, *Peoples Republic of China Oilseeds and Producing Oilseed and Products Annual Report* (Part 1) 2000, GAIN Report CH 0012, Mar. 2000, p. 30.

⁵⁸ Ibid.

APPENDIX A
EXPLANATION OF TARIFF AND TRADE
AGREEMENT TERMS

TARIFF AND TRADE AGREEMENT TERMS

In the *Harmonized Tariff Schedule of the United States* (HTS), chapters 1 through 97 cover all goods in trade and incorporate in the tariff nomenclature the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description. Subordinate 8-digit product subdivisions, either enacted by Congress or proclaimed by the President, allow more narrowly applicable duty rates; 10-digit administrative statistical reporting numbers provide data of national interest. Chapters 98 and 99 contain special U.S. classifications and temporary rate provisions, respectively. The HTS replaced the *Tariff Schedules of the United States* (TSUS) effective January 1, 1989.

Duty rates in the *general* subcolumn of HTS column 1 are normal trade relations 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 listed in HTS general note 3(b) (Afghanistan, Cuba, Laos, North Korea, and Vietnam) plus Serbia and Montenegro, which are subject to the statutory rates set forth in *column 2*. Specified goods from designated general-rate 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 rate of duty 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 several times thereafter, applies to merchandise imported on or after January 1, 1976 and before the close of September 30, 2001. Indicated by the symbol "A", "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 free rates of duty in the special subcolumn followed by the symbol "CA" are applicable to eligible goods of Canada, and rates 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 and implemented effective January 1, 1994 by Presidential Proclamation 6641 of December 15, 1993. Goods must originate in the NAFTA region under rules set forth in general note 12(t) and meet other requirements of the note and applicable regulations.

Other special tariff treatment applies to particular *products of insular possessions* (general note 3(a)(iv)), *products of the West Bank and Gaza Strip* (general note 3(a)(v)), 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), pursuant to the Agreement Establishing the World Trade Organization, is based upon the earlier 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 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. Pursuant to the *Agreement on Textiles and Clothing* (ATC) of the GATT 1994, member countries are phasing out restrictions on imports under the prior "Arrangement Regarding International Trade in Textiles" (known as the **Multifiber Arrangement** (MFA)). Under the MFA, which was a departure from GATT 1947 provisions, importing and exporting countries negotiated bilateral agreements limiting textile and apparel shipments, and importing countries could take unilateral action in the absence or violation of an agreement. Quantitative limits had been established on imported 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. The ATC establishes notification and safeguard procedures, along with other rules concerning the customs treatment of textile and apparel shipments, and calls for the eventual complete integration of this sector into the GATT 1994 over a ten-year period, or by Jan. 1, 2005.

