Industry & Trade Summary

Coffee and Tea

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This report was prepared principally by

Gregory J. Schneider
Joan M. Gallagher

Fruits, Vegetables, and Specialty Products Branch
Agriculture, Fisheries, and Forest Products Division

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

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 coffee and tea covers the period 1988 through 1992 and represents one of approximately 250 to 300 individual reports to be produced in this series during the first half of the 1990s. Listed below are the individual summary reports published to date on the agricultural and forest products sector.

USITC publication number	*Publication date*	*Title*
2459	November 1991	Live Sheep and Meat of Sheep
2462	November 1991	Cigarettes
2477	January 1992	Dairy Produce
2478	January 1992	Oilseeds
2511	March 1992	Live Swine and Fresh, Chilled, or Frozen Pork
2520	June 1992	Poultry
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	May 1993	Cocoa, Chocolate, and Confectionery
2636	May 1993	Olives
2639	June 1993	Wine and Certain Fermented Beverages
2693	November 1993	Printing and Writing Paper
2726	January 1994	Furskins
2737	March 1994	Cut Flowers
2749	March 1994	Paper Boxes and Bags
2762	April 1994	Coffee and Tea

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

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INTRODUCTION

This summary covers all forms of coffee including "green" or unroasted coffee; roasted coffee; ground coffee; soluble or instant coffee; coffee mixed with coffee substitutes; and preparations with a basis of coffee extracts, essences, or concentrates. The liquid concentrate preparations, which are derived from roasted coffee and used for flavorings, are minor products in the domestic and foreign trade of the United States and are not covered in any detail in this report. Reflecting world trading classifications, the report generally analyzes coffee as either (1) Colombian Mild Arabicas, (2) "other Mild" Arabicas, (3) Brazilian and other Arabicas, or (4) robusta. Chicory, an additive to coffee, also is covered briefly.

This summary also covers all forms of tea (except tea beverages[1]), including loose or bagged teas;[2] cut, torn, and curled (CTC) tea; instant or soluble teas; preparations with a basis of instant or soluble teas, and maté, which is used to make a beverage similar to tea. The three principal types of tea included in this report are: (1) black or fermented; (2) green or unfermented; and (3) oolong, which is partially fermented. Herbal teas are cited for statistical purposes but are not extensively analyzed.

This summary provides information on the structure and profile of the U.S. coffee and tea industries, including domestic producers, processors, importers, and transshipments. U.S. consumption and retail pricing trends are also reviewed. There is no known domestic commercial production of chicory or maté, but imports of these products are briefly discussed. This summary generally covers the period 1988 to 1992.

The amounts of coffee and tea grown in the United States are minor when compared to world production levels. Domestic coffee growing is limited to Hawaii and Puerto Rico,[3] where 1991/92[4] totals were 235,000 bags,[5] valued at about $60 million, most of which was for domestic consumption. Tea is commercially grown only on one plantation in South Carolina which, in 1991,[6] produced 55-59 metric tons of tea.

The United States remains the world's largest importer of coffee. U.S. coffee imports in 1992 increased 15 percent to about 21.9 million bags while declining in value by about 11 percent to $1.6 billion, green bean equivalent (GBE[7]), as world coffee prices continued to fall. Colombia, Brazil, Mexico, and Guatemala were the leading suppliers.

Trade sources estimated that the 1992 value of the U.S. coffee market was approximately $4.8 billion, including brands sold through specialty coffee shops. U.S. coffee consumption in 1992 remained flat at 1.75 cups per person per day, well under the peak level achieved in 1962 when daily consumption was 3.12 cups per person.

The United States is among the leading world importers of tea. U.S. 1992 tea imports, excluding herbal and instant teas, increased by 8 percent from the previous year to total 91,365 metric tons. The value of 1992 U.S. tea imports increased over 6 percent to $131 million. China, Argentina, and Indonesia were the leading suppliers by weight, while in value terms, China, Argentina, and Germany were the leading suppliers.

Retail supermarket sales of tea were projected to be over $1 billion in 1992 for the second consecutive year, a 1.5 percent increase in dollar value from 1991 totals and the second year of growth after 7 years of decline.[8] The quantity of tea consumed in the United States has been relatively stable in the last 10 years at an average of 27.7 liters per capita. Approximately 80 percent of U.S. tea consumption is iced tea. Since 1988, ready-to-drink tea sales have grown steadily, marking a 50 percent growth in retail sales and estimated to represent nearly 7 percent of total tea sales in 1992. This growth has mostly come at the expense of soft drink sales.[9]

U.S. exports of non-herbal teas rose over 12 percent in 1992 in quantity and 14.5 percent in value to 5,451 metric tons and $25 million, respectively. U.S. exports have increased by 50 percent in weight and nearly 40 percent by value since 1990. Canada, Japan, Hong Kong, and Mexico were the principal markets for U.S., non-herbal tea exports in 1992.

PRODUCTION METHODS

Coffee

Coffee is the bean or "cherry" as it appears on the tree of a tropical or subtropical evergreen tree or shrub belonging to the genus *Coffea*. Coffee is cultivated throughout the world in over seventy countries. The

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[1] For more information on ready-to-drink tea, see the separate Industry and Trade Summary on *Nonalcoholic Beverages*.

[2] Unless otherwise indicated, the term "tea" applies only to the species *Camellia Sinensis* and not to herbal teas.

[3] The United States Commonwealth of Puerto Rico is considered part of the Customs Territory of the United States as outlined in General Note 2 of the Harmonized Tariff Schedule of the United States (1993). Puerto Rico, however, maintains a distinct duty schedule on coffee imported into the Commonwealth under provisions of 19 U.S.C. 319 of the Tariff Act of 1930.

[4] Crop years for Hawaii and Puerto Rico are Oct./Sep.

[5] Unless otherwise stated, all coffee totals in this report are designated in 60 kilogram bag weights, which is the world standard unit of measure.

[6] Production figures for crop year 1992 remain unavailable.

[7] GBE, or green bean equivalent, is the system of measure used to convert the three tradable coffee types to a common unit. Conversion factors: 1 lb. roast/ground equals 1.19 lbs. green. 1 lb. soluble equals 2.6 lbs. green.

[8] Jeff Nevitt, Nielson Marketing Research, as presented to the 47th Annual Meeting of the Tea Association of the U.S.A.

[9] The Tea Council of the U.S.A., Inc., "Retail Tea Sales Top $1 billion," Industry Bulletin, Nov. 1991.

most important commercial species are *C. Arabica* (Arabica), grown at altitudes of 2,000 to 6,000 feet and native to Ethiopia; and *C. Canephora* (robusta), grown at sea level to 2,000 feet and native to Uganda and Zaire.[10] A newly planted coffee tree usually produces some coffee beans in its first year; but a tree is not considered to be mature and producing its maximum yield until it is 3 to 5 years old. Recently developed varieties such as the Colombian Caturra take less time and are higher yielding than traditional stocks.

Ripe coffee cherries are dark green when immature and ripen to a deep purplish crimson color. Although some naturally level production sites allow for mechanized harvesting, coffee cherries are generally gathered by hand. In some countries, the harvest is made in one collection; however, in other countries, several pickings are required to gather the entire crop. Most coffee trees bear cherries for 20 to 25 years, and each year a mature tree yields about enough beans to fill a one-pound to one-and-half pound can of ground roasted coffee. An average of about 6 pounds of fresh cherries are required to produce 1 pound of clean, green coffee beans.

As illustrated in figure 1, most coffee enters international trade as green coffee, i.e., unroasted beans. Green coffee is produced from coffee cherries by two methods—wet and dry. In the wet method, a disc or rotary pulper removes the hull, or skin, and part of the pulp from the fresh cherry, leaving the mucilage-covered coffee beans. The pulped cherries are fermented (usually 24-48 hours) in large vats of water until the mucilage loosens, and are then washed and dried. The dried cherries (parchment coffee), which under ideal circumstances contain no more than 12.5 percent moisture for quality stability, are then milled, removing the parchment and silver skin. Green coffee produced by the wet method is called "washed," or "mild" coffee. Connoisseurs consider the best tasting coffees in the world to be washed.

The dry or natural method of processing is much simpler. The whole cherry is either allowed to dry on the tree or is picked and then dried. In one operation, the dried husk, the parchment, and the silver skin coverings are removed. This method of drying is common in Brazil and for robusta coffee. The coffee produced in this manner is called "unwashed." This method of processing coffee produces a more neutral, less flavorful coffee than does the wet method, and consequently, these coffees are often used in blends or as fillers.

As coffee enters international commercial channels, the green beans are not so much graded as they are sorted based on size, shape, and number of imperfections and country of origin. Consistency in appearance is important to a roaster who is concerned about uniformity in roasting time.

The International Coffee Organization (ICO)[11] divides coffee into four general groups, primarily for statistical purposes. These groups are designated by the trade as (1) Colombian Mild Arabicas, (2) "Other Mild" Arabicas, (3) Brazilian and other Arabicas, and (4) robusta. Within each group, the geographic location of production, as well as differences in altitude, soil, climate, cultivation, and bean preparation contribute to wide variations in quality. All else being equal, coffees grown at the highest altitudes take the longest to mature, and they produce a coffee bean that is the "hardest" and most flavorful.

The beverage made from the roasted and ground coffee beans is also referred to as coffee. Using a wide assortment of types and sizes of equipment, roasters generally blend various green coffees and then roast the blended coffees to a half-dozen distinct shades of coffee roasts in order to transform the virtually tasteless raw bean into something to be consumed. Although the nomenclature is not universally applied, some common roasts from light to dark include: cinnamon, medium high, city, full-city, French, and Italian, sometimes called Espresso. Some U.S. roasters, particularly those in Louisiana, blend roasted chicory into their coffees. Historically, the darkest coffee roasts were used to mask the generally poorer quality of the coffee bean that a lighter roast would have revealed.

Roasted beans quickly lose their peak flavor and can become stale within weeks if not properly cared for. Ground roast coffees, if not properly stored in airtight containers, can become completely stale in a matter of days. For this reason, stocks of surplus coffee beans are almost always kept as green, unroasted beans. Most coffee roasters, therefore, either roast only what can be quickly sold or vacuum pack their coffees within a day of roasting, a technique that delays but does not arrest the staling process. Valve-lock packaging helps forestall this process.

Soluble or instant coffee (Harmonized Tariff Schedule of the United State (HTS) heading No. 2101) consists of the dried, water-soluble solids of roasted coffee produced by dehydrating concentrates of brewed coffee. This liquid extract is then usually pumped into a spray dryer as a fine mist and emerges as the dried solids. In recent years, instant coffee has also been produced by freeze drying the liquid extract. Frozen coffee extract is placed in a vacuum chamber where the ice vaporizes without liquefying, leaving the dried water-soluble solids. About 2.5 kilograms of green coffee are used in the production of 1 kilogram of soluble coffee.

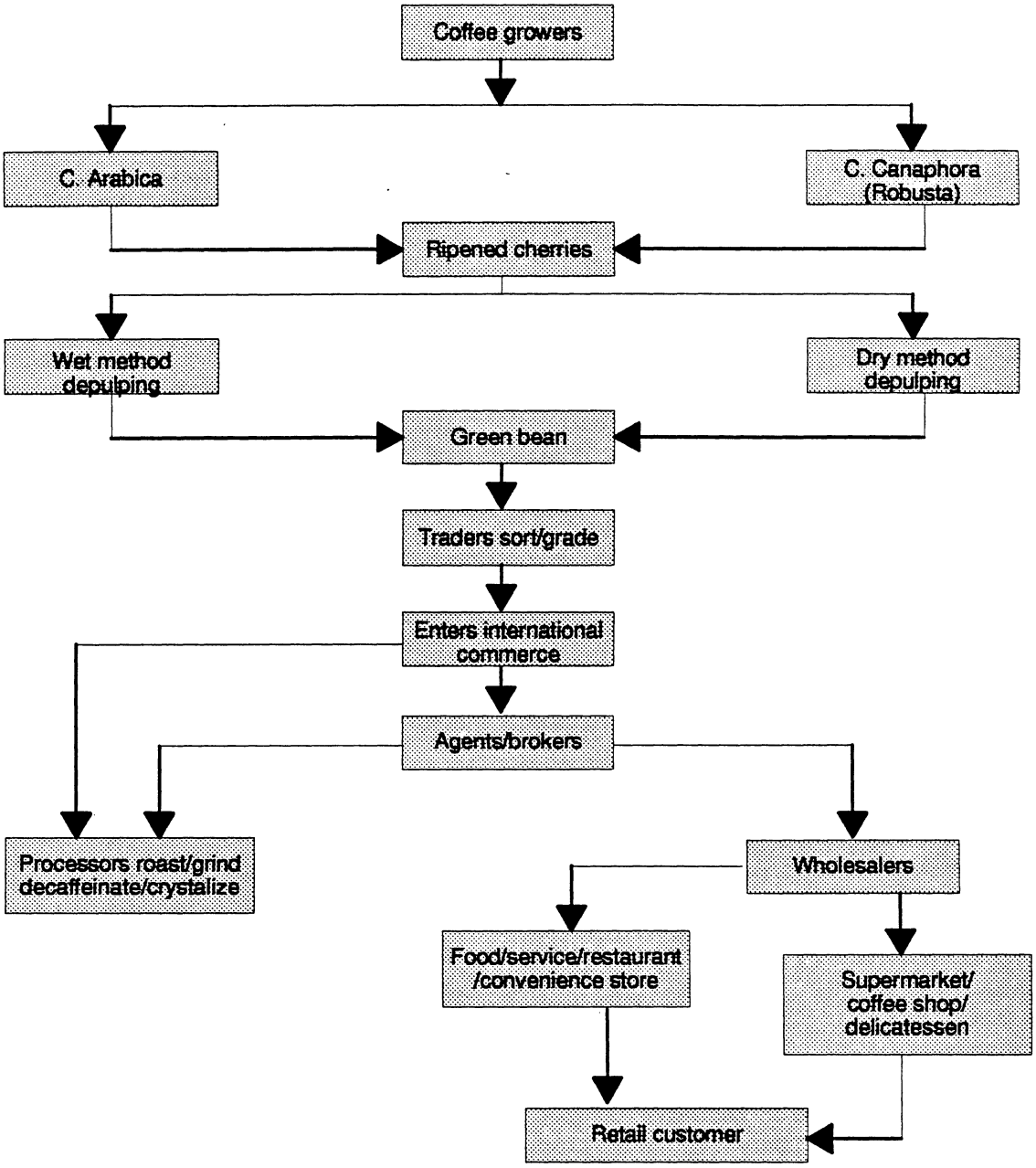
Tea

All teas are produced from the dried leaves of the same evergreen plant species native to Asia, *Camellia Sinensis*. The two principal varieties of teas are the Assam (India) and China, names derived from the

[10] Two lesser important species of coffee, *Coffea liberica* and *Coffea excelsa*, are grown in West Africa and produce a generally poor quality beverage and are of no commercial consequence.

[11] The International Coffee Organization and the International Coffee Agreement it oversees are covered later in the report under "Characteristics of the world coffee market".

Figure 1
Major distribution channels for coffee



Source: USITC staff.

areas from which they originally were found growing wild. Hybrids of these two have been planted throughout the world in response to local growing conditions. Today, the China variety, or China-dominant hybrids, prevail in China, Taiwan, and Japan. The Assam and its dominant hybrids are found in Sri Lanka, Africa, South America, Indonesia, and in the Assam district and other parts of India. Tea plants thrive in warm, rainy regions of the tropics and subtropics. Although some tea plants, especially those of the China variety, will tolerate a cool, dry season, there must be at least one warm, rainy season to match.

Teas planted for commercial purposes, either from seed or grafting, are seldom allowed to grow to the heights that they attain in the wild, where a 5.5 to 6

meter tree is not uncommon.[12] Rather, most tea plants are pruned flat to a height of about one meter for relatively easy plucking, and cultivated on estates or tea gardens. Although some plots are small, the large tea estates in the principal tea countries typically have 7,500 to 12,000 tea plants per hectare, and the estate may be 200 to 400 hectares in size.

A tea plant can typically produce leaves for plucking in 3 years; after 4 years the plant is 50 percent mature; and in 5 years the plant is considered mature. The top two leaves and a bud that are the most desired portion of the tea bush grow out every 6 to 15 days or so, more in the rainy season, less in the dry season. Generally, the tea is hand-plucked, a labor-intensive operation, but can be mechanically harvested as it is in Argentina and South Carolina.

Processing begins as soon after plucking as is practical, in order to take full advantage of the flavors locked in the tea leaf. The three principal categories of tea—green, oolong, and black—are based solely on the differences in the methods of processing the tea leaf. As illustrated in figure 2, it is possible to make all three categories of tea from the same bush, although as a practical matter, market demands have created regional and estate specialization patterns. Japan, for example, produces green teas almost exclusively, while India produces mostly black teas, and China produces all three types.

The processing or manufacturing of green teas is the most straight forward of the three types. To halt the natural enzymatic action that begins as soon as the leaf has been plucked and to assure pliability, the green leaves are placed in a perforated pan or boiler and steamed. After several minutes, the leaves are dried over heat to reduce moisture levels and to arrest further chemical breakdown of the tea. At this point, the leaves are rolled in several styles including balled, flat, curly, thin, and twisted, among other possibilities. Besides country and estate of origin, green teas are further identified by leaf size and the style of rolling or processing. The nomenclature, however, varies from region to region.

The manufacture of black tea differs from green tea production by allowing the leaves to be withered—spread on racks to dry out, rolled, and then fermented before a thorough drying arrests the oxidation and stabilizes the tea leaf. The withering process is often done naturally on large racks and, depending on the climate, can take 8 hours to a day. After this stage the leaves are pliable and have lost approximately half of their moisture. The tea leaves are crushed and twisted between heavy rollers until the juices are liberated. The crushed leaves are then removed to a fermentation room where they lie exposed to cool and humid air for 20 minutes to 3 hours. The leaves take on a bright coppery color and the flavor characteristic of black tea. Drying follows over heat until the moisture levels have been reduced to about 3 percent.

Oolong teas are processed in a similar fashion to the black teas except that both the withering and fermentation stages are shortened. This process results in teas that have the characteristics of both the green and black types.

Black tea, which is graded by leaf size, dominates the U.S. and world tea trade. The basic black tea grades recognized in world trade are whole leaf and broken leaf. Within these two broad categories, a number of well-defined subcategories exist with generally understood characteristics. Even though the industry uses the term "grading" to distinguish black tea leaf size, the term is strictly descriptive and carries no quality connotations.[13]

Tea as a beverage is most often made by placing, or steeping, tea leaves in boiling water. Instant tea, developed in the 1930s, consists of dried, water-soluble solids obtained by dehydrating an infusion of tea leaves and water and is used principally to make iced tea and iced tea mixes. Many iced tea mix preparations contain such ingredients as sugar and dried lemon concentrates and are considered for tariff purposes as edible preparations, not specially provided for (HTSUS heading 2106). Canned iced teas dispensed from vending machines or purchased at retail outlets are alternatives to soft drinks.

Chicory

Chicory is a cultivated plant native to Europe with a large white root about the size of a parsnip. The dried, roasted, and ground root is used primarily as an additive to coffee or, particularly during periods of high coffee prices, as an extender to reduce the cost of coffee. Small amounts of chicory are also used in the manufacture of chocolate, and in soy sauce and other sauces. Crude chicory roots are generally marketed in a cut and dried form that can be stored for 3 or more years with no appreciable loss of quality; they are prepared for use by roasting and grinding. About 25 percent of the weight of the cut and dried crude root is lost during the roasting and grinding.

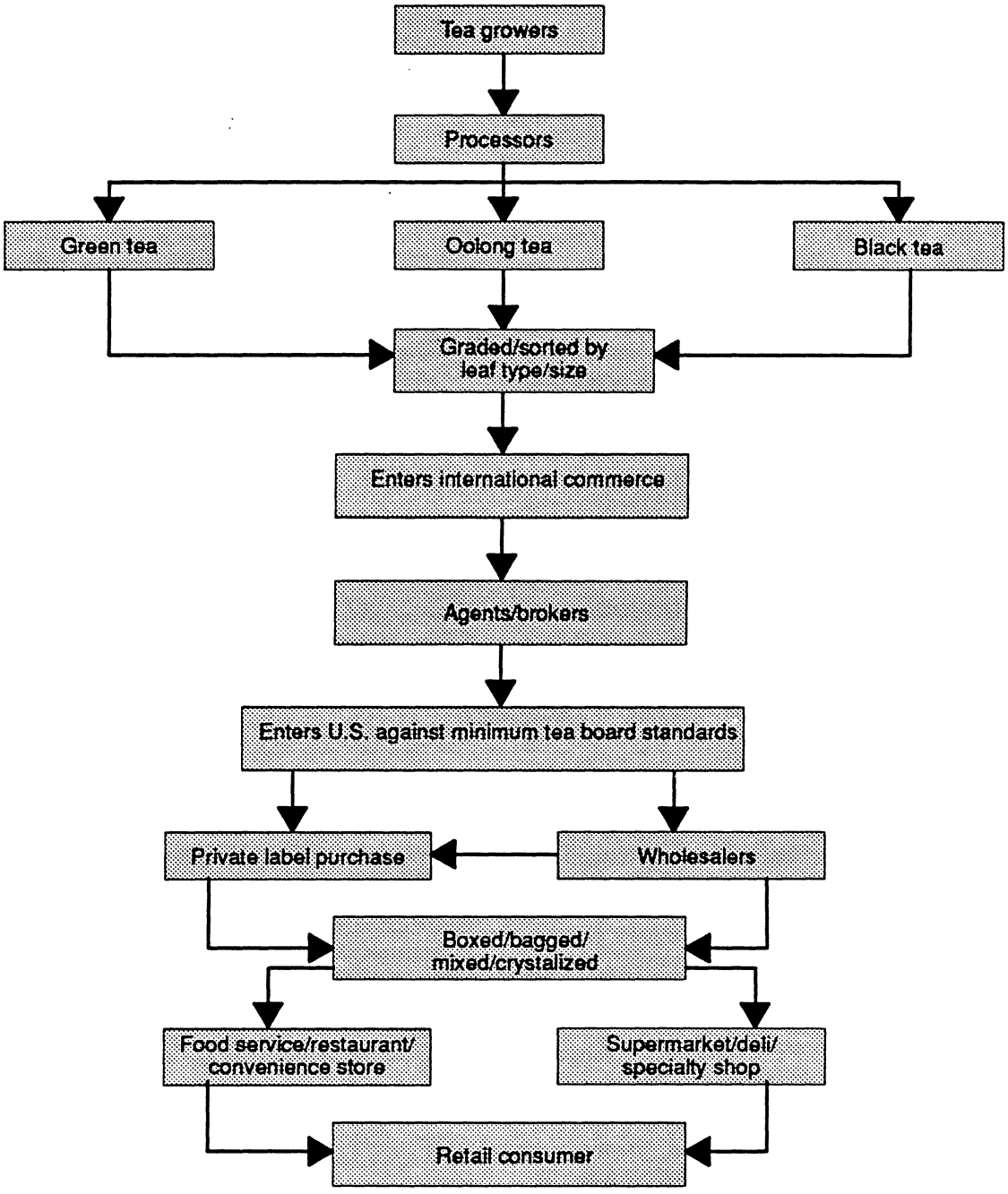
Maté

Crude maté consists of the roasted and dried leaves of a holly bush or tree, *Ilex paraguayensia*, indigenous to South America. Prepared maté is crude maté that has been cleaned, ground, sifted, and blended. Maté is used to make a beverage, similar to tea, which is an infusion of prepared maté and water. Maté, as a beverage, is as popular in parts of South America (particularly in Paraguay and Argentina) as is coffee in the United States.

[12] Tea plants may be allowed to grow tall and go to seed for purposes of propagation.

[13] Elin McCoy and John Frederick Walker, *Coffee and Tea*, (New York: New American Library, 1991). The author has relied on this book throughout the general description of coffee and tea.

Figure 2
Major distribution channels for tea



Source: USITC staff.

U.S. COFFEE INDUSTRY PROFILE

Industry Structure

The structure of the U.S. coffee industry reflects the fact that there is only a limited amount of coffee grown domestically. The importation and processing of the raw commodity, and the marketing of the finished product dominate the industry. The SIC category applicable to the coffee industry is 2095, Roasted Coffee.

Production

Coffee is not grown commercially in the continental United States, although small amounts are grown in Puerto Rico and Hawaii. Both Puerto Rican and Hawaiian coffee are of the Arabica type and are classed in the "Other Mild" group. Hawaiian coffee production has been increasing in recent years as more acreage is brought into production. The reverse is true in Puerto Rico, where the cultivated area has been decreasing.

Coffee picking in the United States is subject to U.S. minimum wage legislation. This tends to place U.S. production at a cost disadvantage relative to production in lower-wage countries; U.S. coffee pickers can easily make in one hour what Central American workers make in a day. Higher harvesting costs, plus a lack of suitable growing land, have kept the domestic industry small. In response to these cost conditions, growers in both Hawaii and Puerto Rico have targeted the high-end, gourmet coffee market where prices can exceed $33 per kilogram in the United States and over $44 per kilogram in Japan. Furthermore, farms on the Island of Kauai are developing coffee varieties and planting techniques that allow mechanical harvesting as a way to reduce labor costs that can exceed $10 dollars an hour at some facilities.

Hawaii

The area devoted to commercial coffee production in Hawaii has been increasing in recent years, particularly on the islands of Maui and Molokai. New acreage also has been planted in Kona, the traditional coffee growing area on the island of Hawaii, but acreage abandonment in the area has offset the increase. The actual percentage increase in production area for the State of Hawaii during 1988/89 to 1992/93 is difficult to determine because only one company commercially produces coffee on the island of Kauai, and for business proprietary reasons, this company does not provide current production data. Table 1 provides information on total Hawaiian production through 1990/91 and on Hawaii production excluding Kauai through 1992/93. U.S. consumption for the years 1988-92 is shown in Figure 3.

The number of farms cultivating coffee in Hawaii has fallen from a high of 635 in 1988/89 to 600 in crop year 1992/93. Low farm prices for the past 3 seasons[14] have contributed to the drop in the number of farms as smaller growers have relinquished farm leases or decided not to harvest.[15] Employment figures for the Hawaiian coffee sector are not available due to the manner in which labor statistics are compiled.

The Hawaii Agricultural Statistics Service (HASS) estimates the 1992/93 coffee crop at approximately 15,120 bags (2.0 million pounds),[16] parchment basis,[17] down 13 percent from the previous season. The farm value of the 1992/93 harvest was $4.1 million, down slightly from the previous season. Although farm prices improved 2 percent from last year's 10-year low, HASS reports some farmers continue to find it uneconomical to harvest their crop with cherry prices averaging 48 cents per pound ($1.06 per kilogram) and picking costs averaging 25 to 35 cents per pound (55 to 77 cents per kilogram).[18]

Due to small harvests and limited distribution, the best Kona coffee, like other super high-end, gourmet coffees (Blue Mountain coffee from Jamaica is another example), is sold outside of the normal international trading channels that apply to coffee. Consequently, price levels for these coffees primarily reflect the reputations established for these coffees through aggressive marketing rather than general world demand and supply conditions for coffee or even quality considerations.

Puerto Rico

Though relatively small compared to world production levels, Puerto Rican green coffee production was estimated at 212,000 bags in 1990-91. The coffee area harvested was estimated at about 38,911 hectares[19] from 1979 to 1988, but more recent figures from the Puerto Rican Department of Agriculture indicate that only 8,100 hectares were under cultivation in 1991. Although coffee is grown throughout the mountainous interior of the island, the Lares and Yauco regions are historically the most famous.

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[14] The coffee harvesting season in Hawaii generally runs from Oct. through Apr.

[15] The definition of a farm in the State of Hawaii for statistical data gathering purposes requires annual sales of at least $1,000.

[16] Hawaiian and Puerto Rican coffee totals are reported in pounds, but for the purposes of this report will be converted into quantities of 60 kg. bags, which is the world standard.

[17] Parchment coffee is coffee produced by the wet processing method, at the stage of processing that it typically leaves the farm. The coffee fruit has been hulled and the outer skin and pulp have been removed by water treatment. The coffee bean is covered by a silver skin and parchment coverings; these are typically removed in a milling process to yield the green bean of commerce.

[18] The domestic industry reports and operates in prices per pound.

[19] Puerto Rican production area figures are generally reported in cuerdas. A cuerdo is equivalent to .393 hectare or .9712 acre.

Table 1
Coffee: Number of farms, acreage, yield, marketings, farm prices, and value of sales, State of Hawaii, 1988/89-1992/93

Year[1]	Number of farms	Area		Yield[2]	Marketings[3]	Farm prices			Value of Sales	Green production
		In crop	Harvested			Cherry	Parchment	All[4]		
		Hectares		*1,000*	*Kilograms*	*Dollars per kilogram*			*$1,000*	*1,000 kilograms*
1988/89	635	1,052	975	.41	4,409	1.63	8.82	7.28	6,600	726
1989/90	635	1,214	1,045	.64	7,055	2.05	9.48	8.60	12,480	1,134
1990/91	630	2,145	1,089	.64	7,385	1.46	6.06	5.95	9,045	1,225
1991/92[5]	615	931	771	.64	5,071	.99	5.73	4.41	4,600	862
1992/93[5]	600	1,093	726	.54	6,173	1.06	5.95	4.52	4,100	726

[1] Coffee harvesting occurs throughout the year in Hawaii. The main harvest normally begins in September and extends to the early part of the following year.

[2] Average yields based on parchment equivalent marketings and harvested area.

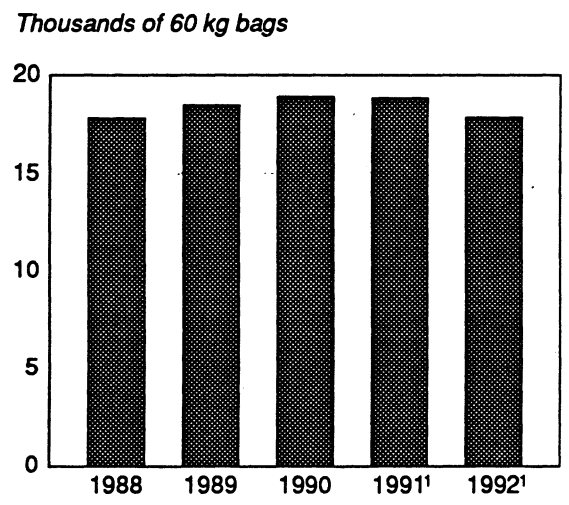
[3] Expressed in parchment equivalent. Coffee marketed in cherry form was converted to an equivalent parchment weight and added to parchment marketings. Parchment coffee is converted to green bean equivalent by multiplying parchment times 0.8

[4] Represents an average farm price for parchment equivalent sales. Obtained by dividing farm revenues from the sale of cherry and parchment coffee by total marketings (parchment equivalent basis).

[5] Excludes Kauai.

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

Figure 3
Coffee: U.S. consumption, 1988-92



[1] Preliminary.

Note.—1 bag = 60 kilograms (132.276 lbs.)

Source: International Coffee Organization and USITC staff.

In part because of lower world prices, the farm value of coffee production has fallen in recent years, from $65 million in 1987 to $51 million in 1991. Coffee plantations employed 12,000 persons in 1990 or 35 percent of all workers engaged in agriculture. The relatively high cost of labor in Puerto Rico and the fact that few Puerto Ricans are willing to pick beans for less than the minimum wage has led some island coffee growers to urge the Commonwealth's Labor Department to permit the importation of workers from neighboring Dominican Republic.[20]

Though exports have varied widely since 1976, from as much as 83,300 bags (1986/87) to as little as 8,915 bags in 1985/86, Puerto Rico's coffee production has seldom covered its domestic consumption needs.[21] Puerto Rican imports have declined in recent years, but the country has imported a significant portion of its supply since 1969. Puerto Rican annual imports averaged 1.5 million bags between 1976-82 and were as high as 83,000 bags as recently as 1987 (table 2).

Imports

U.S. coffee imports averaged over one-quarter of the world's total from 1987 to 1992, making it the largest single destination for world coffee exports. In 1992 U.S. imports of all types of coffee increased 16 percent from 1991 import levels to 22.9 million bags, GBE, valued at $1.7 billion. Green coffee (95 percent) dominates the totals, with soluble (4 percent) and roast/ground (1 percent) filling out the import profile (table 3). In 1992, Colombia and Brazil were the largest suppliers, accounting for 5.0 million bags and 4.9 million bags, respectively. Other major sources of U.S. imports were Mexico, 3.1 million bags; and Guatemala, 1.8 million bags (figure 4). Percentage imports by value reflect generally higher prices paid for Colombian Milds and Other Milds than for Brazilian Arabicas. New Orleans was the principal port of entry for green coffee imports in 1992, accounting for 28 percent of the total; followed by New York, 23 percent; Laredo, Texas, 12 percent; and San Francisco, 11 percent.

The general duty-free status of coffee does not apply to coffee entering the Commonwealth of Puerto Rico, including coffee grown in a foreign country but entering through the United States. Section 319 of the Tariff Act of 1930 (19 U.S.C. 1319) authorizes the legislature of Puerto Rico to impose import duties on coffee imported into Puerto Rico, including coffee grown in a foreign country which comes into Puerto Rico from the United States. Puerto Rico currently imposes duties of $5.51 per kilogram for green coffee and $6.61 per kilogram for roasted or ground coffee.[22]

Import Channels

Coffee moves from the growers in the producing countries to various marketing centers usually located at the port cities, where in turn, exporters sell to foreign buyers. In consuming countries, coffee is generally handled by agents/brokers or more frequently by coffee importers who sell the coffee directly to processors. The coffee agent/broker's basic function is to provide the necessary expertise to buy, ship, and finance the coffee prior to the buyer taking actual possession. The merchants usually have established connections in the producing areas and, through worldwide communication networks, make instantaneous analysis of the market. Coffee importers, on the other hand, may perform these functions, but more often buy directly from the agents/brokers. The large coffee roasting and packing firms maintain extensive buying networks in producing countries and will often import directly through company operatives. Coffee is also purchased by importers, agents, and brokers in large trading centers such as Hamburg and London and reexported around the globe.

In the United States, warehoused coffee lots are traded on a futures market on a speculative basis like other commodities. The Coffee, Sugar & Cocoa

[20] Larry Luxner, "Garrido, Yauco Selecto lead Puerto Rico's exports to Japan," *Tea & Coffee Trade Journal*, June 1992, pp. 42-45.

[21] Puerto Rican production is reported in 60 kilogram bags, which have been converted to metric tons in table 2.

[22] The actual rates are expressed per pound, at $2.50 per pound and $3.00 per pound, respectively.

Table 2
Coffee: Supplies, disposition, and consumption in Puerto Rico, 1983/84-1987/88

Year	Beginning inventory	Production	Imports	Supplies	Exports	Inventory	Probable local consumption	Per capita consumption
				(Metric tons - Green Coffee)				(Kilograms)
1983/84	3,270	12,247	3,402	18,919	736	2,270	15,913	2.20
1984/85	2,270	14,061	2,722	19,053	781	1,210	17,053	2.37
1985/86	1,219	11,340	3,856	16,415	243	2,891	13,280	1.83
1986/87	2,846	15,966	2,268	21,126	2,345	2,662	16,118	2.22
1987/88[1]	2,662	12,927	3,039	18,629	396	3,423	14,809	2.04

[1] Preliminary.

Note.—Does not include processed coffee inventories of roasters and traders.

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

Table 3
Coffee: U.S. Imports, by type and source, 1991 and 1992

(In 60 Kilogram Bags, GBE)

Origin and Type	1991				1992			
	Green	Roast Ground	Soluble	Total	Green	Roast Ground	Soluble	Total
Colombian Milds:								
Colombia	3,048,205	26,846	50,939	3,125,990	4,852,312	21,515	35,458	4,909,285
Kenya	90,939	397	(1)	91,336	73,022	122	4	73,148
Tanzania	16,796	(1)	(1)	16,796	7,143	24	217	7,384
Total	3,155,940	27,243	50,939	3,234,122	4,932,477	21,661	35,679	4,989,817
Other Milds:								
Belize	1,700	(1)	(1)	1,700	27	(1)	(1)	27
Burundi	97,181	8	(1)	97,189	91,636	(1)	(1)	91,636
Costa Rica	602,779	1,840	(1)	604,619	662,406	7,889	(1)	670,295
Dominican Republic	343,487	130	406	334,023	254,030	6,445	(1)	260,475
Ecuador	785,334	2,508	29,346	817,188	752,670	1,965	28,350	782,985
El Salvador	886,237	4,182	(1)	872,419	1,343,860	473	2,494	1,346,827
Guatemala	1,489,387	4,001	(1)	1,493,388	1,812,289	1,998	668	1,814,955
Haiti	3,243	67	(1)	3,310	(1)	(1)	(1)	(1)
Honduras	243,107	354	209	243,670	669,794	60	(1)	669,854
India	82,069	5,980	11,056	99,105	162,778	3,699	3,355	169,832
Jamaica	523	1,459	602	2,584	744	652	373	1,769
Mexico	2,992,942	46,487	5,815	3,041,868	37,714	37,714	2,725	3,082,307
Nicaragua	2,667	32	(1)	2,699	35,794	(1)	(1)	35,794
Panama	92,368	44	(1)	92,412	81,767	2,160	(1)	83,927
Papua New Guinea	31,481	(1)	(1)	31,481	51,775	(1)	(1)	51,775
Peru	609,519	318	(1)	609,837	525,826	70	(1)	525,896
Rwanda	29,359	713	(1)	30,072	12,581	81	(1)	12,662
Venezuela	107,515	337	(1)	107,852	104,142	475	(1)	104,617
Yemen Arab Republic	1,208	(1)	(1)	1,208	2,671	(1)	(1)	2,671
Zambia	596	(1)	(1)	596	942	(1)	(1)	942
Zimbabwe	16,813	(1)	(1)	16,813	3,994	(1)	(1)	3,994
Total	8,401,515	68,460	47,434	8,517,409	9,611,594	63,681	37,965	9,713,240
Unwashed Arabicas:								
Bolivia	867	(1)	(1)	867	292	(1)	(1)	292
Brazil	5,334,499	8,017	380,371	5,722,887	4,252,871	6,287	617,749	4,876,907

See footnotes at the end of table.

Table 3—Continued
Coffee: U.S. Imports, by type and source, 1991 and 1992

(In 60 Kilogram Bags, GBE)

Origin and Type	1991				1992			
	Green	Roast Ground	Soluble	Total	Green	Roast Ground	Soluble	Total
Ethiopia	30,580	(1)	(1)	30,580	23,464	138	(1)	23,602
Paraguay	1,071	(1)	(1)	1,071	900	535	(1)	1,435
Total	5,367,017	8,017	380,371	5,755,405	4,277,527	6,960	617,749	4,902,236
Robustas:								
Cameroon	2,671	(1)	(1)	2,671	43,564	30	(1)	43,594
Cote d'Ivoire	54,316	(1)	(1)	54,316	407,031	(1)	194	407,225
Guinea	(1)	(1)	(1)	(1)	5,302	(1)	(1)	5,302
Indonesia	536,259	1,169	(1)	537,428	581,404	403	(1)	581,807
Madagascar	397	(1)	(1)	397	113,568	(1)	(1)	113,568
Malawi	550	(1)	(1)	550	275	(1)	(1)	275
Malaysia	(1)	(1)	(1)	(1)	(1)	144	(1)	144
Nigeria	397	341	(1)	738	1,841	(1)	(1)	1,841
Philippines	60,676	32	15	60,723	13,383	20	(1)	13,403
Sierra Leone	(1)	(1)	(1)	(1)	334	(1)	(1)	334
Sri Lanka	(1)	(1)	1,716	1,716	(1)	(1)	(1)	(1)
Thailand	602,762	22	(1)	602,784	926,107	(1)	9	926,116
Togo	(1)	(1)	(1)	(1)	340	(1)	(1)	340
Trinidad & Tobago	6,436	14	(1)	6,450	331	48	(1)	379
Uganda	287,166	80	(1)	287,246	223,001	58	(1)	223,059
Zaire	4,214	(1)	(1)	4,214	42,304	(1)	(1)	42,304
Total	1,555,844	1,658	1,731	1,559,233	2,358,785	703	203	2,359,691
Other countries[2]	368,738	136,506	265,977	771,221	492,535	134,610	342,804	969,949
Grand total	18,849,054	241,884	746,452	19,837,390	21,672,918	227,615	1,034,400	22,934,933
Total value ($million)	1,735.4	47.6	75.0	1,858.0	1,566.3	45.3	93.5	1,705.1

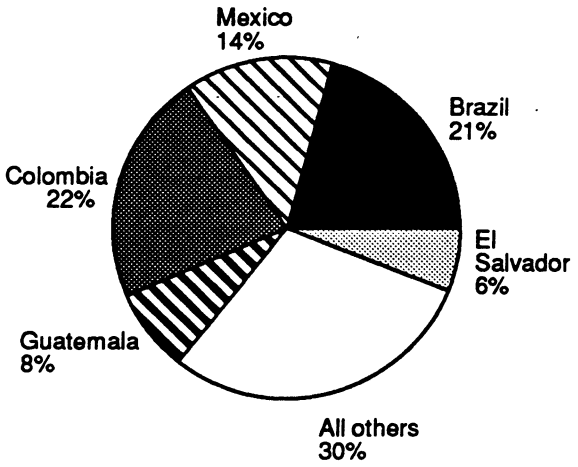
[1] Not available.

[2] Mostly non-producing Western European countries. Conversion factors: 1 lb roast/ground equals 1.19 lbs green. 1 lb soluble equals 2.6 lbs green.

Source: Horticultural and Tropical Products Division, FAS/USDA.

Figure 4
Coffee: U.S. imports, by major sources, 1992

(60 kg. bags, GBE)



Total imports: 22.8 million bags.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Exchange (CSCE) in New York, which trades Arabicas exclusively, handles all futures transactions in cents per pound (37,500 pound lots) under the traditional "C" contracts.[23] Before certifying a coffee lot as deliverable, CSCE graders in New York inspect samples sent from port districts around the country. Trading in robusta futures is done on the London Futures and Options Exchange (London FOX) and the Paris/Le Havre exchange. Prices for robusta on the London FOX are expressed in dollars per metric ton while prices on the Paris/Le Havre exchange are in French francs per kilogram.

In 1990, agents/brokers or importers handled 90 percent of all coffee shipments entering the United States, implying that roasters imported the balance.[24] In the United States there are about 51 agents and brokers handling the importation of green coffee, over 50 percent of whom are either in California (11) or in New York (18). There are approximately 113 operations that characterize themselves as coffee importers and 35 specialty coffee importers with some overlap in the two groups. New York dominates the regular coffee importer category (48); but the Pacific Coast is the center of the specialty coffee industry with California (14) and Washington (3) as home to about 50 percent of the specialty coffee importers.[25]

Exports

The larger coffee trading companies (merchants and agents) are believed to account for the majority of U.S. exports of green coffee. Owing to such factors as the impassability of the Saint Lawrence Seaway in the winter months and the New York location of the spot coffee market, it is not uncommon for coffee traders to enter green coffee at New York and then later export the coffee to Canada. Generally, these firms have established processing subsidiaries and distribution networks in the foreign market.

One method of computing transshipments is to use data on reexports[26] from the United States. Total 1992 reexports of coffee from the United States amounted to 573,524 bags (over 97 percent of which was reexported as green bean) or about 10 percent more than in 1991. Canada is the primary destination for U.S. reexports.

Processors

According to the Department of Commerce's Bureau of the Census,[27] the domestic coffee processing industry in 1987 consisted of 111 companies primarily engaged in roasting coffee and manufacturing coffee concentrates and extract in powdered, liquid, or frozen form.[28] The number of coffee processing companies declined 9 percent from the 118 companies reported in the 1982 Census. A decline of 9 percent between 1987 and 1982 also was experienced in the number of employees in the roasted coffee industry, with employment dropping from 11,800 to 10,700.

The U.S. coffee processing industry consists of regional roasters and packers, including retail grocery companies and large national food manufacturers. Many processors are independent roasters who prepare their own brands and products for chain grocers. Others are national or regional food manufacturers who prepare their company's brands of coffee. Coffee is also processed by small food manufacturers and specialty shops.

The Bureau of the Census estimates that the value of shipments for industries listed under SIC 2095 was

[23] The "C" contract is the principal contract traded on the Coffee, Sugar & Cocoa Exchange, and calls for delivery of washed arabica coffee produced in several Central and South American, Asian, and African countries..

[24] International Trade Centre (UNCTAD/GATT), *Coffee: An Exporter's Guide*, Geneva, 1992, p. 91.

[25] Jane Phillips McCabe, ed., *1992 Ukers' International Tea & Coffee Directory and Buyer's Guide* (New York: Tea & Coffee Trade Journal, 1991). This trade publication relies on questionnaires for its information and may not be comprehensive. Because the listings are presented state by state, these totals include duplicates both within and across categories.

[26] Reexports are characterized by the Department of Commerce as exports of coffee to which no value has been added in transit.

[27] Bureau of the Census, the U.S. Department of Commerce, *1987 Census of Manufactures*, Industry Series: Miscellaneous Food and Kindred Products.

[28] For the Census, a company is defined as a business organization consisting of one establishment or more under common ownership. There were 141 establishments engaged in the roasting of coffee and the manufacture of coffee concentrates in 1987, a decrease from the 152 establishments reported in 1982.

$6.4 billion in 1987, up from $5.8 billion in 1982 (the only years for which official U.S. data are available) (table 4). The concentration of the industry is illustrated by the fact that the largest four firms account for 66 percent of the value of shipments of roasted coffee, and the largest 20 account for over 90 percent.[29]

The 141 firms listed in the last completed *Census of Manufactures* in 1987 were generally small to medium size with 59 firms having 1 to 19 employees and 53 having 20 to 99 employees. More recent estimates on market share for roasters show that in 1989 there were 3 roasting establishments that employed more than 500 employees, producing among them 35 percent of the total volume of roasted coffee; 6 firms with between 250-499 employees, producing 18 percent; and 24 firms with between 100-249, producing 20 percent.[30] Trade sources indicate that concentration in the coffee processing industry tends to increase during periods of high green coffee prices because smaller firms have more difficulty competing on a product by product basis with larger roasters.

There has been tremendous growth in small or micro-roasters, a term used to describe firms roasting 250-500 bags a year. In 1969 there were fewer than 20 firms classified as micro-roasters, most clustered along the west coast from San Francisco to Seattle. By 1979, the number of micro-roasters had doubled to 40 and by 1989 there were approximately 385. The increase in small roasters helped define the idea of specialty coffee in the consumer's mind and helped spawn the growth of small- to medium-size coffee companies employing 10-19 workers. Among that group of approximately 90 that existed in 1989, almost half had not been in operation 10 years earlier.[31]

According to industry sources,[32] the U.S. ground roast market continues to be dominated by a few companies, with Philip Morris' General Foods with its Maxwell House brand (33.4 percent) and Procter & Gamble with its Folger's brand (31.5 percent) estimated to account for two-thirds of the ground roast market in 1992. The instant or soluble coffee market is equally concentrated, with General Foods and Nestle combining for a 67 percent share of the market. The market value of the industry, including coffee sold through specialty shops, which sources estimate accounts for an additional $1.6 billion in sales, was approximately $4.8 billion in 1992. U.S. green coffee roastings in 1992 were down nearly 6 percent over the previous year, to 17.3 million bags. The 5-year average for coffee roastings from 1988-92 was 17.5 million bags. With the exception of 1988 and 1992, there has been a steady annual increase in U.S. green coffee roastings since 1986. Industry sources indicate that there are about 171 regular and about 126 specialty coffee roasting establishments spread throughout the United States. The relatively even distribution pattern suggests that roasters tend to be located near the markets they serve.

Marketing Channels

Once coffee is imported and processed it is commonly sold to a wholesaler. Wholesalers, in turn, generally sell to the grocery trade. Wholesale prices are usually set by the largest processors. Changes in wholesale quotations by one or more of these industry leaders are often followed by widespread competitive moves by other processors. When analyzing wholesale price information, it should be considered that even though quoted wholesale prices may be stable over certain periods, various types of promotional tie-in sales may result in actual wholesale prices which vary considerably from month to month.

Coffee flows from the wholesaler to the final consumer through retail grocery companies (supermarkets), institutional outlets, specialty shops, or other retailers. A number of the choices on an average supermarket shelf are regional and private-label brands which are normally available for purchase at a wide range of retail prices.

The institutional market consists of restaurants, hotels, and fast-food outlets, as well as other public and private facilities. These outlets are generally supplied by regional and local coffee processors and wholesalers. Specialty coffee shops generally purchase green beans or special order blends and roastings directly from importers and roasters, and usually offer a high-priced product.

Price Trends

U.S. retail roasted coffee prices (coffee that is traded and packaged as regular, not gourmet quality) have fallen steadily since the suspension of the economic provisions of the International Coffee Agreement[33] in 1989, averaging $5.68 per kilogram in 1992, compared with $6.19 in 1991 and $6.54 a year earlier. Wholesale ground roast prices, on the other hand (all packs), remained stable, averaging around $6.15 per kilogram in both 1990 and 1991, before falling to $5.94 in 1992 (table 5). Soluble prices averaged $20.17 per kilogram in 1990, increased to $20.33 per kilogram in 1991, and fell in 1992 to $18.63.

The growing specialty coffee market supports considerably higher retail and wholesale prices. Many specialty coffees command $6 to $12 per pound retail

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[29] Bureau of the Census, the U.S. Department of Commerce, *1987 Census of Manufactures*, Subject Series: Concentration Ratios in Manufacturing, table 4, p. 6-8.

[30] Margaret C. Andrews, *Avenues for Growth: A 20-Year Review of the U.S. Specialty Coffee Market*, Copyright 1992 by the Specialty Coffee Association, Long Beach, Ca.

[31] Ibid.

[32] John C. Maxwell, Jr., "The Coffee Industry in 1992," *The Maxwell Consumer Report*.

[33] The International Coffee Agreement and the International Coffee Organization are covered later in the report under "Characteristics of the world coffee market".

Table 4
Coffee: U.S. coffee roasting industry shipments, employment, value added, and capital expenditures, 1982 and 1987-89

Item	1982	1987	1988	1989
Roasted coffee				
Value of industry shipments (million dollars)	5,827.0	6,400.6	6,332.4	6,167.2
Total employment (thousands)	11.1	10.7	10.7	10.5
Payroll (million dollars)	(1)	303.0	315.6	303.1
Production workers	6.9	6.6	6.7	6.5
Hours worked (millions)	(1)	13.6	12.7	13.5
Payroll (millions)	(1)	170.5	173.4	172.3
Average hourly wages	$10.47	$12.54	$13.65	$12.76
Non-Production				
Employees (thousands)	(1)	4.1	4.0	4.0
Hours worked (millions)	(1)	8.5	8.3	8.3
Payroll (million dollars)	(1)	132.5	142.2	130.8
Average hourly wages	(1)	$15.54	$17.09	$15.72
Value added by manufacture (million dollars)	(1)	2,589.8	2,795.8	2,658.1
(Value added/(Industry shipments)	(1)	0.4046	0.4415	0.4310
Value added per production worker	(1)	$392,394	$417,284	$408,938
Capital expenditures (million dollars)	80.5	155.2	123.2	120.9
Capital expenditures per production worker	(1)	$23,515	$18,388	$18,600

[1] Not available.

Source: The U.S. Department of Commerce, Bureau of the Census.

Table 5
Coffee: Average annual U.S. wholesale coffee prices, 1987-92

(Per kilogram)

Type	1987	1988	1989	1990	1991	1992
Ground roast, all pack	$6.64	$6.41	$6.54	$6.14	$6.15	$5.94
Ground roast in one pound can	6.49	6.34	6.74	6.86[1]	7.07	6.53
Soluble	18.91	19.10	20.54	20.17	20.33	18.63

[1] Not comparable with previous data; includes gourmet coffees.

Source: Compiled from official statistics of the U.S. Department of Labor, Bureau of Labor Statistics.

and some coffees, such as Jamaican Blue Mountain, sell for up to $25 per pound in retail "gourmet coffee shops".[34]

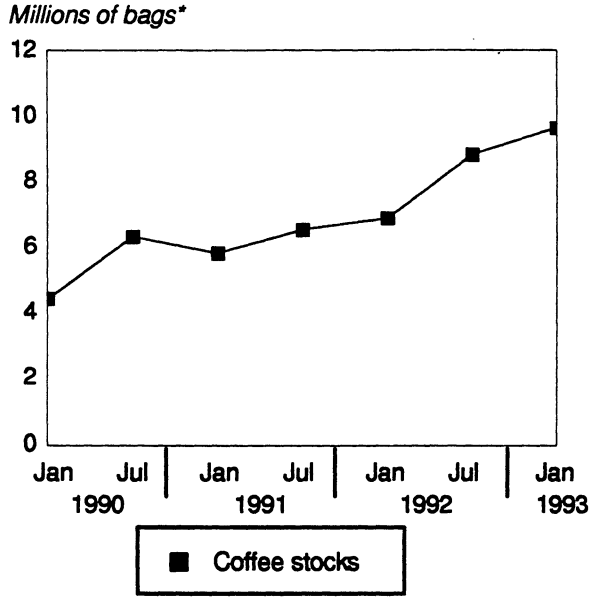
[34] Specialty or gourmet coffee generally refers to high-grown Arabica beans that produce an especially rich, aromatic, and full-bodied brew. This class of coffee most often commands a premium price that is based on cup quality and availability. A true specialty coffee reflects careful selection of variety and cultivation by the growers; proper processing, grading, storage and shipping by the mill owner and exporter; conscientious roasting, blending, and grading by the roaster/wholesaler; and marketing, packaging, and presentation by the retailer that maintains optimum freshness and appeal.

U.S. coffee stocks have risen nearly 250 percent since the suspension of the ICA quota system in July 1989. March 1993 figures indicate that the United States alone maintains 50 percent of the stock position of all the importing countries of the world despite accounting for only about 25 percent of world consumption. According to USDA sources, this fact, in part, underlies the continued depressed prices for coffee traded in the United States and suggests that prices will remain flat as U.S. roasters and processors draw upon existing stockpiles (figure 5).

The slim margin between wholesale and retail coffee prices confirms coffee's use as a loss leader

marketing tool. Coffee has traditionally been used as a loss leader by retailers to entice customers to shop in a given store. Consequently, retailers promote coffee sales through various advertising specials and coupon allowances that reduce profit margins. In fact, it is not unusual for national food chains that market multiple product lines to sell coffee below replacement cost in order to draw customers into their stores.

Figure 5
U.S. coffee stocks, 1990-93



* Bags of original weight.

Note.—Totals include stocks certified and not certified to meet specifications for futures contacts.

Source: Green Coffee Association of New York City, Inc.

Consumer Characteristics and Factors Affecting Demand

Consumption Patterns

The International Coffee Organization estimated that U.S. per capita consumption of coffee in 1990 was 4.57 kilograms, nearly unchanged from a year earlier. Finland had the highest annual rate of consumption at 12.94 kilograms per capita, followed by Sweden, 11.93 kilograms; and Austria, the Netherlands, Norway, and Denmark, all of which are over 10 kilograms.

According to the National Coffee Association's (NCA) annual coffee drinking study,[35] U.S. coffee consumption during the winter of 1993 was 1.87 cups per person per day, slightly above the 1991 figure of 1.75 cups, but well under the peak level achieved in 1962 when daily consumption was 3.12 cups. In 1993, consumption of regular coffee, which accounts for 86 percent of all coffee consumed, was 1.61 cups per person per day; decaffeinated coffee, 0.28 cup; and soluble coffee, 0.25 cup. Soluble coffee consumption has been declining since its peak level of 0.75 cup per person per day in 1974.

Reasons cited for the steady decline of coffee consumption in the United States range from increased competition from cold drinks, especially soft drinks, to lifestyle changes away from structured meals in the home. Additionally, increased extraction rates in brewing and higher roasting yields from improved roasting systems have led to a decline in consumption of beans. Coffee consumption does not appear to vary with most changes in retail prices. Research on coffee buying patterns indicates that coffee demand is not very responsive to price changes.[36]

The percentage of people 10 years of age and older that drink coffee has remained relatively constant since 1986 at 52.4 percent. The number of cups of coffee consumed daily by coffee drinkers was 3.58 in 1993. The NCA study shows that more than half (51 percent) of all coffee was consumed at breakfast, 35 percent between meals, and 14 percent at other meals. Also, 72 percent of coffee consumption was at home, 18 percent at work, and most of the balance was at "eating places".[37]

Industry sources indicate that specialty or gourmet coffees are the fastest growing segment of the industry. This trend has dramatically improved the availability of better tasting coffees and has spawned a range of new or improved products on the market. These include: premium brands produced by the major manufacturers, specialty, country-specific coffees sold in bins in super markets and delis, and a range of specialty coffees sold by local and national roasters and retail coffee shops. Of the 10.5 million bags of coffee consumed at home in the United States in 1991, 2 million bags were specialty coffee beans, nearly 9 percent of which were sold in gourmet coffee shop outlets (figure 6).

The Specialty Coffee Market

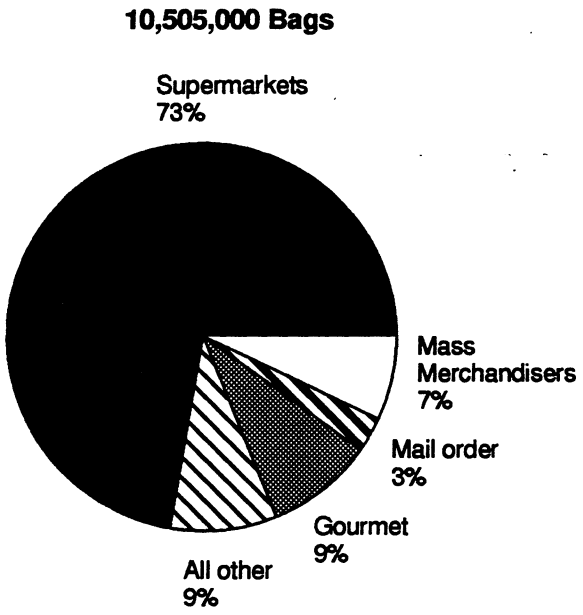
Unlike coffee buying trends in the 1960s when coffee was often purchased during the weekly trip to the supermarket, specialty coffee marketing relies on a broader distribution network. In addition to supermarkets which have begun to install specialty

[35] National Coffee Association of U.S.A., Inc., *United States of America: Coffee Drinking Study Winter 1993* (New York).

[36] According to the International Monetary Fund, the world short-term price elasticity of demand is about -0.19, while the long-term elasticity has been estimated at -0.23. International Monetary Fund, Research Department, *Primary Commodities: Market Developments and Outlook.* May 1988. pp. 53-55.

[37] National Coffee Association of U.S.A., Inc., *United States of America: Coffee Drinking Study Winter 1993,* (New York).

Figure 6
Sources of coffee for household consumption, 1991



Source: Specialty Coffee Association of America.

coffee bins, a shopper may now find specialty whole beans or freshly roasted ground coffee at:

* Specialty coffee stores
* Gourmet delis
* Fancy food stores
* Gift/houseware stores
* Mail order
* Mass merchandisers/discount stores
* Coffee cafes

In retail dollars, industry tracking surveys estimate that the premium coffee segment accounted for almost 20 percent of the total U.S. industry in 1990 and that it will account for 33 percent of sales in 1994. This trend is beneficial for the industry as a whole since this pattern moves the coffee industry away from a commodity-like orientation.[38] Increased marketing support and higher quality specialty coffees have stabilized industry volume trends and per capita consumption. Paralleling the rapid rise in specialty coffee bean sales has been the growth in coffee equipment sales such as grinders, espresso and cappuccino machines and carts, and related appliances.

Research by a specialty food association[39] revealed that over 22 percent of the persons contacted in their questionnaire of a nationally representative sample of U.S. households had purchased gourmet coffee or fancy tea in the last 6 months. Furthermore, the survey indicated that 7 percent of those polled only bought gourmet coffee or fancy tea while 26 percent purchased both gourmet and regular quality.

The Specialty Coffee Association of America (SCAA) has reported that the average specialty coffee drinker is more likely to live in the northeast, middle-Atlantic, or west coast in population centers over one million. The largest age group of specialty coffee drinkers is the 25-55 range. The specialty coffee drinker is college educated with an average household income of $35,000 per year, and is especially strong in the over $50,000 per year income group. Specialty coffee, like non-premium varieties, is still primarily consumed at home, though there are indications that specialty coffee is increasingly being purchased by the cup at work, at coffee bars, and at restaurants.

Coffee Advertising

The promotion of coffee for the retail market is an important business in the United States. Industry sources[40] estimate that for the first 6 months of 1991, companies with advertising budgets for coffee exceeding $100,000 spent $129 million on coffee marketing compared to $122 million for the same period in 1990, up over 5 percent. Philip Morris, whose brands include Maxwell House, and Procter & Gamble, with its Folger's brand, accounted for $88.3 million of this total or 68.4 percent. The National Federation of Coffee Growers of Colombia increased its advertising expenditures by over 13.5 percent to $8.3 million from January-June 1990 to January-June 1991.

U.S. TEA INDUSTRY PROFILE

Industry Structure

The structure of the U.S. tea industry is similar to that of the U.S. coffee industry because there are also only limited quantities of this commodity grown domestically. As with coffee, the importation and processing of the raw commodity, and the marketing of the finished product dominate the industry. The SIC category applicable to tea in consumer packages is found as industry 2099D, a subheading under Food Preparations, N.E.C.

Production

Tea production has generally flourished in countries where low cost labor is available for its labor-intensive cultivation and harvesting requirements, and in climates similar to those found near the

[38] *Maxwell Consumer Report: The Coffee Industry in 1990*, p. 2.

[39] National Association for the Specialty Food Trade, "Today's Specialty Food Consumer: Who, What, Where, When, Why." *NASFT Showcase*, March/April 1990.

[40] Sources: Leading National Advertisers Inc., and John Maxwell of Butcher & Singer, Inc., Richmond, VA.

equatorial zone. These desired conditions traditionally have discouraged U.S. domestic tea production. However, a former Thomas J. Lipton Co. experimental station on Wadmalaw Island, South Carolina was turned into a 12 hectare tea plantation in 1987. In 1991, production of tea from this plantation reached 55,000-60,000 kilograms—one of the highest production per hectare totals in the world.

The South Carolina operation has been able to compete with imported teas by using a mechanized production process to reduce high U.S. labor costs. The mechanized harvesting, as well as denser plantings and selective propagation of plants, have helped increase yields above the world average.[41]

The South Carolina plantation produces black tea, which it packages in the original blend that can be used in hot or iced tea, and markets a blend especially for iced-tea. Freshness of the domestic product compared to imports is emphasized in marketing. The operation maintains a full-time staff of about 15-20 people who are mostly engaged in packaging and basic maintenance of the facility. During harvest season additional employees are added for processing and other seasonal activities.[42]

Imports

U.S. tea imports (excluding herbal and instant tea) grew 1 percent in value and in volume between 1988 and 1992 (table 6).[43] China was the major source of the imports in 1992, accounting for over a quarter of the total in 1992, by quantity. Other important suppliers to the U.S. market were Argentina, 25 percent; and Indonesia, with an 18 percent share. Black tea imports represented about 94 percent of the total with green tea comprising the remainder. While German exports to the United States in 1992 were under 5,000 metric tons, these exports were valued over $20 million, or third behind Chinese and Argentine totals. Reflecting high value-added content, Germany has been a leading tea products exporter by value to the United States since 1989. China has consistently been the largest exporter of green tea to the U.S. market.

U.S. imports of herbal teas increased 42 percent by weight and 90 percent by value for the same time period. In 1992, however, herbal tea imports declined slightly owing to depressed international prices (table 7).[44] China, Germany, the Republic of Korea, and Taiwan were the principal sources of herbal tea imports in 1992.

[41] Commission staff conversation with Mr. William Hall, Co-Owner, Charleston Tea Plantation, 1992.

[42] More recent data on the size and production of this operation are not available.

[43] Prior to the adoption of the Harmonized Tariff Schedule on Jan. 1, 1989, there was not a separate breakout for herbal teas. Therefore, specific import and export data are not available before 1989.

[44] Herbal teas are considered as botanical plants other than *Camellia Sinensis* that are used to make a tea-like beverage.

Import Channels

Although most tea is handled by agents/brokers or independent importers, a significant percentage of the larger firms' tea enters through their overseas affiliates. The exact percentage of tea imported in this manner varies from company to company. The tea agent/broker generally works on a commission basis providing the necessary expertise to buy, ship, and finance the tea prior to the buyer taking possession. The merchants usually have established connections in the producing areas, and through worldwide communication networks make instantaneous analysis of the market. Tea importers generally take direct possession of the tea and work on a mark-up basis. As a general rule, tea importers only import tea and handle no other commodity. However, as much as 70 percent (by weight) of the tea entering the United States may be imported directly by the large processors.

Tea trading involves an international network of growers, buyers, sellers, and a range of intermediaries. Although some tea is bought directly from estates, most tea is sold at auction houses around the world. Principal auction centers include cities in producing countries, such as Cochin in South India, Colombo, and Nairobi, and major transit stations such as London and Hamburg. Most tea sold on a retail basis has been blended from teas from around the world.

In 1992, there were 62 tea packers, 34 specialty tea packers, 29 tea importers, and 19 specialty tea importers operating in the United States.[45] These figures represented slight declines across all categories from 1991 totals except for specialty tea importers, which increased from 16.

Role of Food and Drug Administration

The Tea Advisory Board (The Board) within the Food and Drug Administration has met once a year to determine, through taste-testing, the minimum standards that tea must meet to enter the United States.[46] This process of determining tea quality strictly by means of the senses is the only standard used beyond leaf size in grading tea.

Six tea importers or executives of large American tea packing companies serve 3-year terms with one permanent executive secretary to make up the Board. The Board chooses eight teas that will act as the minimum standard for the coming year. It is against these standards that the Board determines whether various shipments are good enough to be sold in the United States. The Food and Drug Administration, under the provisions of the Tea Importation Act of

[45] Jane Phillips McCabe, ed., *1992 Ukers' International Tea & Coffee Directory and Buyer's Guide* (New York: Tea & Coffee Trade Journal, 1992). This trade publication relies on questionnaires for its information and may not be comprehensive. Because the listings are presented state by state, these totals include duplicates both within and across categories.

[46] The Tea Advisory Board is to be eliminated during FY 1994 under the 1994 Agriculture Appropriations Bill (P.L. 103-111).

Table 6
Tea: U.S. imports for consumption, by principal sources, 1988-92[1]

Source	1988	1989	1990	1991	1992	1988	1989	1990	1991	1992
	Metric tons					*1,000 dollars*				
Asia and Oceania:										
China	22,950	19,636	19,579	21,859	24,026	20,108	20,303	21,723	23,091	25,213
Indonesia	14,380	12,293	10,650	13,477	16,350	18,693	15,971	14,542	14,781	17,285
India	3,625	2,701	2,565	2,648	2,893	9,269	7,450	8,131	7,358	6,096
Sri Lanka	5,919	5,548	3,762	3,702	3,907	11,217	11,150	8,088	7,250	7,266
Taiwan	1,041	890	664	664	505	3,657	8,412	5,995	2,196	2,191
Africa:										
Kenya	6,198	6,005	3,996	4,056	4,357	10,565	10,339	7,463	7,070	7,211
Malawi	1,645	1,871	1,585	1,958	2,650	2,271	2,533	2,086	2,514	3,339
Latin America:										
Argentina	13,815	17,218	17,100	19,457	22,879	8,964	12,593	14,768	16,689	21,840
Brazil	4,147	4,734	3,882	3,453	3,679	5,091	5,679	5,172	4,217	4,261
Other:										
Germany	5,218	5,727	4,931	4,824	4,408	19,766	21,389	21,247	21,267	20,767
All other	11,206	8,634	8,283	8,222	2,551	19,366	16,266	16,805	8,931	9,168
Total	90,144	85,257	76,997	84,330	91,365	128,967	127,085	126,020	123,278	130,754

[1] All types, except instant teas and herbal teas. Includes HTS Nos. 0902.30.0000, 0902.30.0010, 0902.30.0090, 0902.40.0000, 0902.10.0000, and 0902.20.0000.

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

Table 7
Herbal teas: U.S. imports for consumption, by principal sources, 1989-92[1] [2]

Country of origin	1989	1990	1991	1992	1989	1990	1991	1992
	1,000 dollars				*Metric tons*			
China	1,373	1,586	2,664	3,611	448	1,186	708	1,128
Germany	1,131	1,556	2,613	2,153	190	308	456	339
Republic of Korea	1,203	1,365	1,956	1,996	56	90	316	267
Taiwan	544	5,648	4,629	1,202	54	107	180	91
India	1,022	2,609	959	814	283	190	20	68
All other	3,407	4,618	4,157	6,759	1,528	1,340	1,147	1,751
Total	8,680	17,382	16,978	16,535	2,559	3,221	2,827	3,644

[1] Includes HTS Nos. 1211.90.40.20, 1211.90.80.80 and 2106.90.6087.

[2] Prior to the adoption of the Harmonized Tariff Schedule on Jan. 1, 1989, there was not a separate breakout for herbal teas.

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

1940 (29 Stat. 604; 21 U.S.C. 41-50), charges 3.5 cents per hundred pounds (or fraction thereof) for the examination and grading of imported tea.

Exports

U.S. exports of regular teas rose 35 percent in value and nearly 80 percent in volume between 1988 and 1992 (table 8). Canada, Japan, the Philippines, and Taiwan were the principal markets in terms of value for U.S. non-herbal tea exports in 1992. Black teas comprised 83 percent by value and 78 percent by weight of U.S. exports. The largest importers in terms of value of U.S. green teas in 1992 were Italy, Canada, and Taiwan. The largest importers in 1992 in terms of value of black tea from the United States were Canada, Japan, and the Philippines.

Herbal tea exports more than doubled by weight and value in 1992 for the second consecutive year to 8,842 metric tons valued at $54.8 million. The continuing export growth reflects sharp increases in sales to France, Spain, and Australia, and continued large exports to Canada (table 9).

Processing and Marketing

The Department of Commerce reports that the total value of product shipments for "tea in consumer packages," SIC code 2099D,[47] was $940.9 million in 1991, up from $936.3 million in 1987. The number of tea bag packing companies with shipments of $100,000 or more totaled 32 in 1987; there were six powdered tea processing companies with shipments of over $100,000.

[47] Tea is listed in the broad category of "Miscellaneous Food and Kindred Products." A detailed breakdown of the industry including employment data is, therefore, not desegregated in the SIC table.

U.S. companies shipped 124 million pounds of tea packed in tea bags valued at $569 million in 1987. U.S. companies processed 178 million pounds of powdered tea in 1987, valued at $348.6 million.[48]

The retail tea industry is highly concentrated. Industry sources estimate that Thomas J. Lipton Co., Tetley Inc., and Nestle' together account for as much as 80 percent of the U.S. market with a number of much smaller players vying for the remainder. These companies buy a large share of the available tea, often an entire estate's production from a producing country, and package the tea under their label. There is very little independent packaging.

Once tea is imported and packaged, tea flows through the domestic marketing channel from the wholesaler to the final consumer through the retail grocery companies, institutional outlets, specialty shops, and other wholesalers and retailers. The institutional market consists of restaurants, hotels, and fast-food outlets, as well as other public and private facilities. These outlets are generally supplied by the large tea importers through company representatives.

Price Trends

The many varieties, grades, qualities, and types of tea marketed make comparisons of wholesale tea pricing trends relatively meaningless. Nielson Marketing Research has tracked retail tea price trends, and found that overall retail tea prices increased by the following amounts: 3 percent in 1989, 4 percent in 1990; and 4 percent in 1991, the latest year for which data were available. The retail price increases of tea stayed slightly below the consumer price increases for the relative time period: 4 percent in 1988; 5 percent in 1989, 6 percent in 1990; and 7 percent in 1991.

[48] U.S. Bureau of the Census, *1987 Census of Manufactures: Industries Series, Miscellaneous Food and Kindred Products*, Dec. 1989, p. 201-22.

Table 8
Tea: U.S. exports, by principal markets, 1988-92[1]

Market	1988	1989	1990	1991	1992
			(1,000 dollars)		
Canada	6,666	5,692	8,024	9,554	12,164
Japan	3,989	3,993	1,395	2,494	1,748
Philippines	824	644	1,318	682	1,200
Taiwan	311	1,055	660	660	1,053
All other	5,240	4,078	6,307	8,321	8,695
Total	17,030	15,462	17,704	21,711	24,860
			(Metric tons)		
Canada	1,103	988	1,393	1,815	2,527
Japan	620	747	278	570	361
Philippines	118	89	176	160	168
Taiwan	101	314	144	174	236
All other	849	1,279	1,534	2,134	2,159
Total	2,791	3,417	3,525	4,853	5,451

[1] All types except herbal teas.
Note.—Includes Schedule B Nos. 0902.10.00.00, 0902.20.00.00, 0902.30.00.00, 0902.40.00.00 and 2101.20.00.00.
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 9
Herbal tea: U.S. exports, by principal markets, 1988-92[1]

Market	1988	1989	1990	1991	1992	1988	1989	1990	1991	1992
	1,000 dollars					*Metric tons*				
France	0	3	16	4,012	23,927	0	1	3	653	3,827
Spain	0	5	0	3,686	10,679	0	(2)	0	505	1,563
Canada	2,164	1,932	5,415	7,676	9,057	320	429	773	1,172	1,486
Australia	1,344	1,203	652	1,759	2,458	205	222	91	267	376
Italy	258	93	42	112	1,139	40	18	7	23	181
All other	478	2,403	5,653	8,061	7,511	76	309	971	421	1,409
Total	4,244	5,639	11,778	25,304	54,771	641	979	1,845	4,041	8,842

[1] Includes Schedule B Nos. 1211.90.84.00 and 2106.90.60.87.

[2] Less than 1 metric ton.

Note:—Data before 1989 are estimated.

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

Retail price trends have borne little resemblance to the price trends at the London auction, where the world teas are traded (figure 7). Again, this discrepancy in trends stems from the many varieties, grades, qualities, and types of teas marketed in the United States.

Consumer Characteristics and Factors Affecting Demand

U.S. per capita consumption of tea has remained relatively unchanged since 1980 at about 0.35 kilogram. Comparatively, in 1990 Ireland consumed 3.1 kilograms per capita and the United Kingdom consumed 2.8 kilograms per capita. In the United States, about 80 percent of consumption is as iced tea, whereas tea is drunk as a hot beverage in most other consuming nations. The leading consumers of tea in the United States are women 30 years of age or older. The northern portion of the United States led the country in tea consumption in 1991 at 20,400 metric tons, with the southern portion of the United States following at 18,600 metric tons; the central portion of the United States consumed 12,700 metric tons, and the west consumed 5,400 metric tons.[49] The types of tea purchased by geographical area in the United States differ widely. Tea bags are the largest type of tea purchases throughout the United States, but make up the greatest portion of tea sales (over 75 percent) in the south. The north purchases the largest percentage of iced tea mix (43.4 percent of northern tea purchases), while the largest proportion of herbal tea is purchased in the west (14.6 percent of tea purchases). The central portion of the United States consumes the largest proportion of iced tea mix (23.7 percent of tea purchases).[50]

Tea can be purchased loose, in tea bags, and as instant tea, in the form of pure tea or in a mix with sugar (or other sweeteners) and flavorings. More recently, tea has been sold as liquid concentrates for dispensing through soft drink fountain heads, and in cans, bottles, aseptic containers, dairy cartons and one gallon jugs. Large and small producers are also engaged in marketing a whole range of tea products from raspberry or peach flavored bottled teas, to liquid tea concentrates which are mixed with water to produce a tea beverage in seconds.

In terms of percentage increases, the recently introduced "ready-to-drink" liquid tea has been the most successful. Expanding annually by at least 20 percent from 1989 to 1992,[51] liquid teas are often found on grocery shelves, in vending machines, and compete directly with carbonated soft drinks.

[49] "1991-A Year to Celebrate", presentation to the Tea Association of the United States, by Stephen Ruggiero, Nielsen Marketing Research, Oct. 1991.

[50] Ibid.

[51] 1992 figure is for the 52 weeks preceding June 1992.

U.S. CHICORY AND MATÉ INDUSTRY PROFILES

Chicory and maté are not grown in the United States; however, domestic manufacturers process and package imports. There are two known domestic processors of chicory in the United States. Belgium, Italy, and Jamaica were the main sources of U.S. dried chicory imports during 1988-92. Dried chicory imports in 1992 totalled 7,166 metric tons, valued at $15.6 million. Roasted chicory imports remained relatively steady from 1988 through 1992 at around 2,400 metric tons.[52] However, imports declined significantly in 1992 to 1,411 metric tons, valued at $3.1 million. Imports from the former West Germany, which had been the main supplier in the early part of the period examined, have been declining steadily. The largest importers of roasted chicory in the U.S. market are coffee companies, which blend the roasted chicory with coffee. U.S. exports of roasted chicory are very small, totalling only $662,000 in 1992. Exports of dried chicory are larger—$2.3 million in 1992—but are believed to be reexports. Over 95 percent of these exports are to the British Virgin Islands.

U.S. consumption of maté is small and supplied almost entirely by imports from Argentina and Brazil. Imports of maté in 1992 totalled 269 metric tons, valued at $478,000.[53] Most of the imports enter in bulk and are repacked in small cartons by U.S. importers for distribution to the retail trade.

FOREIGN INDUSTRY PROFILES

The world coffee and tea industries share several characteristics common to tropical agricultural commodities. First, coffee and tea are almost exclusively produced and exported by developing countries and imported by industrial countries. Second, the returns from coffee and tea exports play a substantial role in many producer countries' economies and a vital role in world monetary exchanges between developed and developing countries.[54] In 1989,[55] coffee accounted for over 90 percent of export earnings

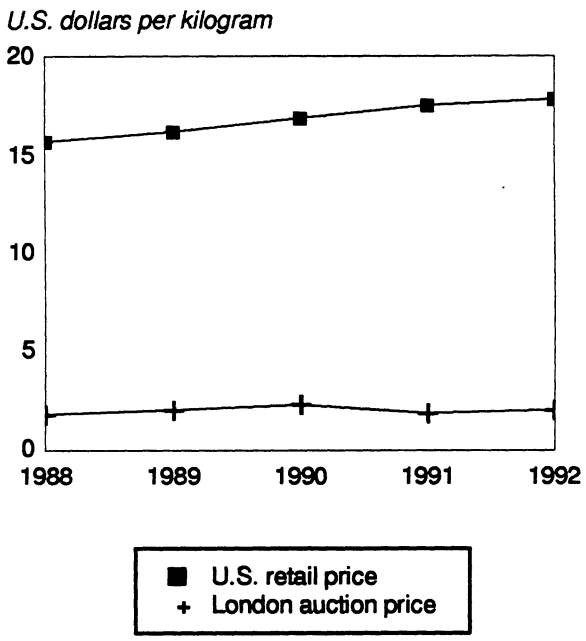
[52] The HTS subheading for this product includes "other roasted coffee substitutes", but these products are believed to comprise a very small amount of the import value and volume.

[53] Maté also enters the United States in a basket subheading containing tea and maté extracts, essences, and concentrates. However, maté is believed to comprise a negligible portion of the value and volume of these imports.

[54] Figures on the role of coffee and tea in the respective economies cited in this summary are drawn from various U.S. State Department telegrams and from the *United Nations Conference on Trade and Development (UNCTAD) Commodity Yearbook 1989*, (New York: United Nations, 1989).

[55] Although this information demonstrates coffee's traditional importance as a vital export commodity to the countries concerned, data after 1989 are not included on account of the effect of the 50 percent fall in the ICO indicator price since Feb. 1989.

Figure 7
Tea: U.S. retail and London auction prices, 1988-92



Source: The International Tea Committee and U.S. Department of Labor statistics.

for Uganda and Rwanda, over 80 percent for Burundi, and between 20 percent and 50 percent for eleven other developing countries. In 1987/88, tea accounted for over a quarter of the total export value of Sri Lanka and Kenya, and was a major component of the agricultural economies of India, Indonesia, Malawi, China, and Argentina. Coffee and tea exports generally earn a higher percentage of total foreign exchange earnings for smaller nations than for the larger nations.

Third, investment in coffee and tea production, as with many other internationally traded agricultural commodities, is risky. Long periods of oversupply and low prices followed by relatively brief periods of short supply and high prices have plagued both industries. Droughts, floods, freezing weather, earthquakes, disease, and civil strife have all affected world supplies at one time or another. For example, a freeze in the frost-prone Parana region of Brazil reduced world supplies drastically in 1975/76 and raised world prices to historic highs.

For many less developed countries, coffee and tea production represents an integral component of rural development, with commodity prices directly affecting the fortunes of many small farmers and laborers. Coffee and tea production is often a very important generator of employment and therefore has considerable influence on the social structure and development of producing countries.

Coffee

World Production

The world coffee trade is a multi-billion dollar industry involving scores of countries scattered across the globe and many millions of farmers, merchants, and consumers. World coffee production[56] for 1991/92 was 103.4 million bags, up slightly from a year earlier, and surpassing the all-time high of 103.3 million bags of coffee harvested in 1987/88.[57]

The 1991/92 world exports of coffee, which represents total harvested production minus estimated domestic consumption, totalled over 82 million bags, a 6 percent increase over the previous year (figure 8). Top producing and trading countries include Brazil, Colombia, Indonesia, Mexico, and Cote d'Ivoire. In 1990, Colombia replaced Brazil as the leading coffee exporter in total value of exports despite the fact that Brazilian total production was twice that of Colombia's. This is the result of the higher prices the Colombian Mild Arabicas command on the world market and smaller Colombian domestic consumption. Figures 9 and 10 and table 10 illustrate the world production by regions and selected countries.

Major Producers

North America

North America, for purposes of USDA data that serve as the basis of these country analyses, includes the United States[58], Central America, Mexico and the Caribbean nations. This region maintained consistent production levels from 1987-92 but lost ground in world production percentage, decreasing from 22 percent of world green coffee production in 1986/87 to 18 percent in 1991/92. Mexico, Guatemala, Costa Rica, and El Salvador were the largest producers during 1991/92. Guatemala, which exports over 90 percent of its production, replaced Mexico as the largest regional exporter in 1991/92.

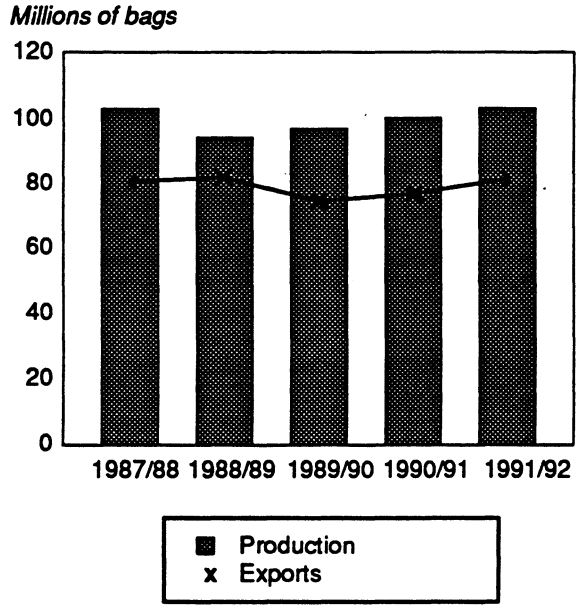
Coffee remains an important agricultural product of the region, especially in Central America. The coffee industry is the largest employer in Nicaragua (175,000 in 1991) and generated 30, 45, and 20 percent of the total foreign exchange earnings in Guatemala, El Salvador, and Honduras, respectively, in 1991. As a result of low international coffee prices since July 1989, the economies of the region have been severely affected. Partially in an attempt to counteract this effect, Costa Rica, Guatemala, and Honduras are

[56] The figures cited in this summary for world production are not exhaustive, but reflect production in the 56 most significant producer countries.

[57] Coffee marketing begins about October in some countries and April or July in others. The global distribution of coffee production makes it difficult to gather calendar year statistics.

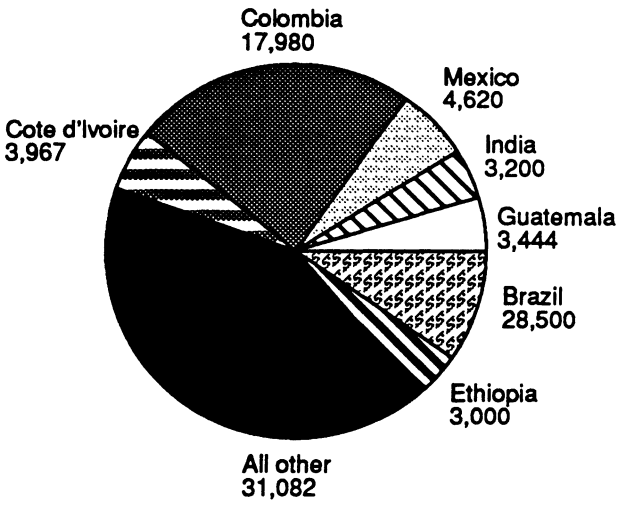
[58] Statistics on the coffee grown in the United States (Puerto Rico and Hawaii) can be found under "U.S. Production".

Figure 8
Coffee: World production and exports, crop years 1987/88 to 1991/92



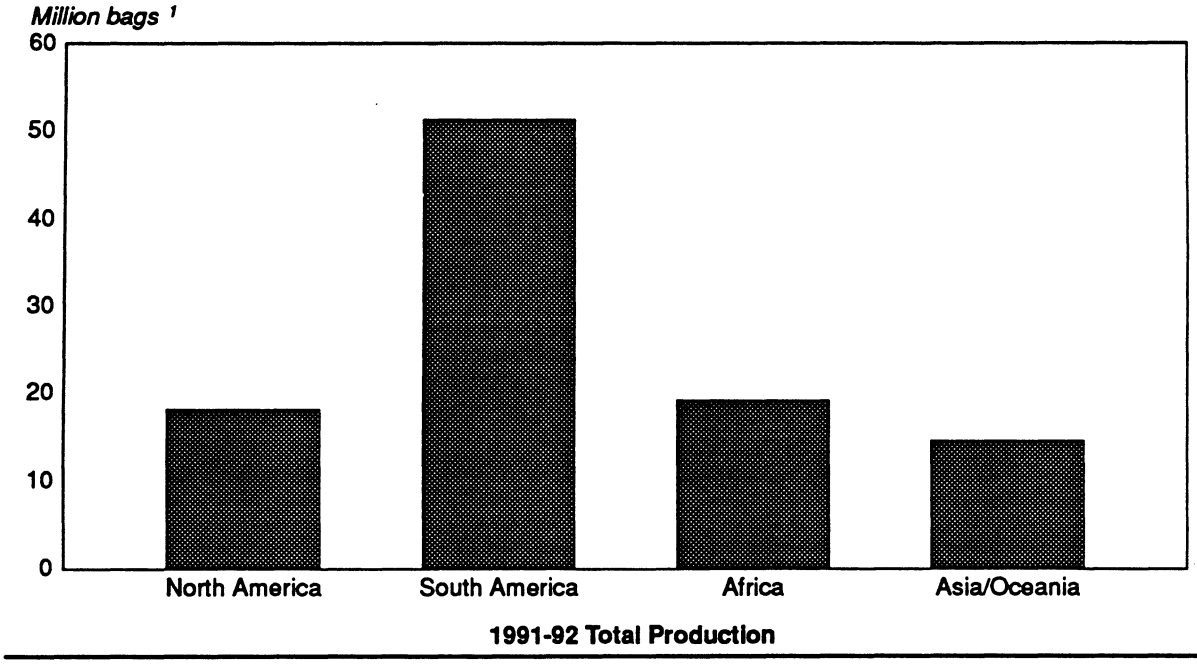
(In 60 kg. bags)
Source: FAS/USDA.

Figure 9
Green coffee: World production, by selected countries, crop year 1991/92



Source: FAS/USDA.

Figure 10
Green coffee: World production, by region, crop year 1991/92



[1] In 60 kg. bags.
Total World Production 103.4 million bags.
Source: FAS/USDA.

Table 10
Green coffee: World production, by regions and selected countries, marketing years, 1987/88 to 1991/92[1]

(1,000 60 kg bags[2])

Region and country	1987/88	1988/89	1989/90	1990/91	1991/92
North America:					
Mexico	4,717	5,500	5,100	4,550	4,620
Guatemala	3,020	3,022	3,472	3,282	3,444
Costa Rica	2,375	2,758	2,453	2,565	2,530
El Salvador	2,538	1,492	2,787	2,603	2,357
Honduras	1,553	1,635	1,928	1,685	2,255
Other	2,886	2,820	2,951	2,659	2,970
Subtotal	17,089	17,230	18,696	17,350	18,176
South America:					
Brazil	38,000	25,000	26,000	31,000	28,500
Colombia	13,000	10,700	13,300	14,500	17,980
Ecuador	1,663	2,150	2,150	1,830	1,800
Peru	1,020	1,400	1,400	1,150	1,050
Venezuela	1,331	1,127	1,075	843	1,112
Other	464	610	693	687	893
Subtotal	55,478	40,987	44,618	50,010	51,335
Africa:					
Cote de'Ivoire	3,103	3,989	4,734	4,000	3,967
Ethiopia	3,200	3,400	3,400	3,500	3,000
Uganda	2,600	3,300	2,500	2,700	3,000
Zaire	2,000	1,750	2,000	1,695	1,500
Kenya	2,160	1,960	1,740	1,503	1,572
Cameroon	1,251	1,760	1,440	1,450	1,485
Madagascar	1,125	1,100	1,100	1,100	1,150
Other	3,734	3,854	3,652	2,637	3,575
Subtotal	19,173	21,113	20,481	18,585	19,249
Asia and Oceania:					
Indonesia	5,965	6,750	7,100	7,400	7,100
India	2,050	3,590	2,150	2,970	3,200
Vietnam	579	922	985	1,200	1,350
Philippines	1,045	1,350	1,149	970	950
Papua New Guinea	1,100	1,175	1,092	964	784
Thailand	592	1,025	800	785	1,000
Other	214	221	215	300	220
Subtotal	11,545	15,033	13,491	14,589	14,604
Grand total	103,285	94,363	97,286	100,534	103,364

[1] Coffee marketing year begins about October in some countries and April or July in others.

[2] One bag is equivalent to 132.276 pounds.

Source: U.S. Department of Agriculture, FAS, Horticultural and Tropical Products Division, December 1992.

actively promoting specialty coffee, relying on the generally excellent world reputation of their finest coffees.

South America

South American production fell about 8 percent during 1987-92 and now represents about 50 percent of world coffee production. Colombia and Brazil dominate the regional output and together account for over 45 percent of the world's total production. From 1987/88 to 1991/92, Brazilian coffee production declined by 25 percent to 56 percent of South American production, while Colombian totals increased 38 percent to capture 35 percent of the South American production share. Ecuador was a distant third with under 4 percent in 1991/92 (table 10).

Colombia

Coffee is produced in Colombia on more than 300,000 farms, ranging in size from one hectare to more than 100 hectares, or an average of 3.5 hectares. Colombian exporters of mostly washed Arabicas are taking advantage of a free world market and strong demand for quality coffees by increasing exports and reducing their stock positions (table 11).

Table 11
Green coffee: World exportable production, by regions and specified countries, marketing years, 1987/88 to 1991/92[1]

(1,000 60 kg bags[2])

Region and country	1987/88	1988/89	1989/90	1990/91	1991/92
North America:					
Mexico	3,137	3,880	3,650	3,150	3,170
Guatemala	2,720	2,717	3,162	2,972	3,134
Costa Rica	2,140	2,508	2,198	2,305	2,270
El Salvador	2,369	1,332	2,607	2,423	2,173
Honduras	1,353	1,435	1,722	1,473	2,035
Other	1,756	1,572	1,688	1,436	1,714
Subtotal	13,475	13,444	15,027	13,759	14,496
South America:					
Brazil	28,000	15,500	15,500	20,000	19,500
Colombia	10,980	8,891	11,538	12,885	16,580
Ecuador	1,381	1,865	1,849	1,537	1,402
Peru	820	1,209	1,219	968	870
Other	644	720	742	607	1,198
Subtotal	41,825	28,185	30,848	35,997	39,550
Africa:					
Cote de'Ivoire	3,071	3,957	4,700	3,264	3,929
Ethiopia	1,756	1,767	2,239	1,717	1,300
Uganda	2,547	3,250	2,450	2,650	2,845
Zaire	1,791	1,530	1,780	1,480	1,300
Kenya	1,985	1,787	1,665	1,433	1,483
Cameroon	1,206	1,725	1,405	1,420	1,895
Madagascar	908	872	870	865	914
Other	3,405	3,651	3,356	3,174	3,096
Subtotal	16,669	18,539	18,465	16,003	16,762
Asia and Oceania:					
Indonesia	4,915	5,478	5,820	6,185	5,670
India	805	2,335	1,150	1,920	2,120
Vietnam	567	887	890	1,100	1,250
Papua New Guinea	1,087	1,160	1,081	954	775
Thailand	482	892	640	625	840
Other	565	971	523	277	174
Subtotal	8,421	11,723	10,104	11,061	10,829
Grand total	80,459	71,891	74,444	76,820	81,637

[1] Coffee marketing year begins about October in some countries and April or July in others. Exportable production represents total harvested production minus estimated domestic consumption.

[2] One bag is equivalent to 132.276 pounds.

Source: U.S. Department of Agriculture, FAS, Horticultural and Tropical Products Division, December 1992.

From the introduction of the coffee plant to Colombia in the latter part of the 19th century up to the last two decades, coffee was the most important Colombian export item. It was not until the mid-1980s that coffee first dipped below 50 percent as a source of Colombia's export income. The historic importance of coffee to Colombia's economy can be traced through increasing governmental intervention in the sector. The Colombian government founded the National Coffee Federation in 1927 as a result of Depression era price fluctuations, and played a primary role in the formation of the International Coffee Organization and the International Coffee Agreement in the 1960s.[59] Colombian import policy during this period was determined by the price behavior of coffee: import restrictions were eased during coffee bonanzas, and increased when prices were depressed.

Since the mid-1960s, however, successive administrations have worked to diversify Colombia's

[59] The International Coffee Organization (ICO) and the International Coffee Agreement (ICA) are discussed later in the report.

export base. The country's export base now includes more manufactured goods, cut flowers, bananas, and petroleum and mining products. The expansion of these export sectors cut coffee's share to 20 percent of export revenues in 1990.

The Federacion Nacional de Cafeteros (Federacion), an organization of independent producers and cooperatives, provides technical assistance to growers, and also supervises and partly implements internal and external marketing. The Federacion directs a system of taxation and price supports that partly shields coffee producers from external market fluctuations. Through a "National Coffee Fund", the Federacion consistently buys and exports from 50 to 60 percent of the Colombian export totals. Private exporters buy the rest. Farmers have the option to sell either to the Federacion at the official minimum price or to exporters who may offer prices above the official minimum when market conditions so permit. The Federacion also assists farmers in controlling coffee rust disease and "broca" insect damage through a damaged tree buyout program.

Brazil

Based on tree stock numbers, Brazil has the potential for close to 40 million bags of production annually.[60] Brazil has about 320,000 farms, 75 percent of which are less than 10 hectares. Although Brazilian production has fallen from 50 percent of world production before the Second World War to less than 30 percent by 1992, Brazil remains a key player in the world coffee economy. Brazilian coffee production is projected to average about 30 million bags by the mid-1990s and 33 million bags in the early 2000s. Brazil's actual production, however, is likely to fluctuate widely due to weather conditions and world coffee prices.[61]

Although most of the coffee produced in Brazil is unwashed Arabica, an important trend in Brazil's production profile is the increasing share of robusta (Conillon) coffees. According to the USDA, the percentage of robusta in Brazil's total production increased from 5 percent in the late 1970s to about 15 percent in 1992. Initially the Conillon production was directed to the domestic market, which consumes nearly one third of total production, or it was sold to soluble coffee manufacturers. In the early 1990s, however, Conillon became a serious competitor in export markets with African and Asian robustas.

The Brazilian coffee industry is highly organized and, prior to March 1990, was highly regulated by the Brazilian government and the Insituto Brasileiro do Cafe (IBC). Since March 1990, the Brazilian government no longer intervenes directly in the marketing of coffee; farmers and cooperatives negotiate free market sales prices directly with exporters or their agents. The Government of Brazil through the Secretaria Nacional de Economia, however, still retains controls over export prices through a closely monitored system of central bank registrations.

Brazil has an important influence on world coffee supply and prices and maintains a prominent role in the allocation of export quotas under the International Coffee Agreement.[62] Based on Brazil's production capacity that has in recent years approximated 30 percent of world totals coupled with relatively stable consumption patterns in the industrialized countries, world market prospects critically depend on the future trend in, and fluctuation of Brazil's output.[63]

Africa

Though Kenya, Burundi, Ethiopia, and Tanzania produce some of the world's most prized Arabica coffees, Africa remains the leading producer of robusta coffee in the world. Africa's production of coffee remained relatively constant between 1988/89 and 1992/93, maintaining yearly totals near the 5-year average of 19.75 million bags. Africa's world share of coffee exports, however, fell slightly from 19 percent to 18 percent during 1987/88 to 1992/93, reflecting emerging consumer preference for South American Arabicas.

Cote d'Ivoire, which is Africa's leading producer of coffee, grows only the robusta variety. Its 1991/92 production totaled nearly 4 million bags, or about 21 percent of the continent's crop. Kenya, on the other hand, produces some of the highest quality mild Arabica coffee in the world, with about 70 percent coming from the small holder sector. Cooperative farmers produce 65 percent of Kenya's coffee harvest, and plantation farmers grow the remainder. The fact that Kenya exports mostly Arabica coffees puts the country in a much better marketing position than other African producers that grow robusta coffee. Despite this advantage, production has been generally declining since 1988/89 because of low international coffee prices.

Over 86 percent of the coffee produced in Africa was exported in 1991/92 (more than 98 percent in some countries). Coffee is not a traditional drink in most African countries. African consumers generally prefer to drink tea in the home and office.

Asia and Oceania

This region includes many of the traditional tea growing countries such as India and Sri Lanka, as well as Indonesia, the third leading coffee producer in the world behind Brazil and Colombia and the largest

[60] Brazil's 1991 coffee tree population is estimated at 4.23 billion trees that includes 3.97 billion bearing trees and 260 million non-bearing. This represents, according to the Foreign Agricultural Service, a maximum annual production potential of 42-43 million bags should the majority of coffee trees in all producing states be on the on-year of the production cycle.

[61] USDA/FAS.

[62] The International Coffee Agreement is discussed in a later section of this report.

[63] *Coffee to 1995, Recovery Without Crutches,* the Economist Intelligence Unit Special Report No. 2116, London, Mar. 1991.

producer of robusta coffees. The region as a whole has seen a general rise in coffee production during the period 1987/88 to 1991/92 and has maintained its share of world production at near 14 percent. The region's farmers produced 14.6 million bags of coffee in 1991/92, of which about 11 million, or over 75 percent, was exported.

Indonesia produces primarily unwashed robusta coffee, which is predominantly grown by smallholders, who account for over 90 percent of total production. Notwithstanding its importance as a world producer, and unlike many African and Central American producers, coffee exports accounted for less than 4 percent of Indonesia's total exports during 1986-88. Indonesia has concentrated on rehabilitation and intensification of existing planted area rather than expansion. A part of this policy has been an effort, as yet unrealized, to change the 1991 production profile from 93:7 (robusta/Arabica) to about 80:20. Although small as a percentage of total export sales, Indonesia's Arabicas are being actively promoted as brand-identified coffees and are commanding high prices. The role of the Indonesian Government is limited to the collection of taxes, the administration of quality controls, and the monitoring of foreign exchange receipts.

Characteristics of the World Coffee Market[64]

International Coffee Agreement

Nearly all the leading producer and consumer nations are members of the International Coffee Agreement (ICA), an agreement that regulates the $10 billion to $12 billion world coffee market. The membership includes 39 producing countries and 15 importing countries[65] that account for approximately 95 percent of coffee entering world trade. The collapse in July 1989 of the economic provisions of the International Coffee Agreement, which had since 1983 regulated the price and supply of coffee on the world market, contributed to the recent fall in coffee prices.

The ICA: Background

In 1958, the United States called the first Coffee Study Group meeting in Washington, DC, inviting both importing and exporting countries to discuss measures to stabilize coffee prices and to deal with the long-term consequences of overproduction. From this and other meetings, a group of producing and consuming nations established the 1962 International Coffee Agreement. The 1962 Agreement and subsequent agreements sought to achieve a balance between supply and demand of coffee that would assure adequate supplies at fair prices for consumers and remunerative prices for producers. The Agreements also have as their objective the economic diversification of the coffee-producing countries and the fostering of increased coffee consumption world-wide. The International Coffee Organization (ICO), which was established under the 1962 agreement, is headquartered in London and administers the ICA under rules and regulations established by the International Coffee Council (ICC). This 5-year agreement was renegotiated and renewed (with periods of extension and of suspension of quotas in between) in 1968, 1976, and 1983.

The 1983 ICA

Under the conditions of the 1983 ICA that entered into force provisionally in October 1983 and definitively on September 11, 1985, the ICO periodically calculated and negotiated export quotas on coffee to support the price of coffee (the economic provisions of the agreement). These quotas were based on several criteria: (1) the demand in importing countries, and (2) the past exports, stocks, and other country-specific situations (such as need) in each exporting country. The quotas were adjusted upwards or downwards every 2 years by a member council, according to a price mechanism that was negotiated for each coffee year. While trade-related criteria were the historical basis for the original quota allocation, it has been extremely difficult politically to negotiate any changes in the 1983 agreement.

Member countries committed themselves to the following two procedures under the 1983 agreement. First, the exporting nations agreed not to sell coffee to nonmember nations at lower prices than those offered to importing member counties. Second, the importing member countries agreed to check "certificates-of-origin" on coffee imported from exporting member countries in order to ensure that they did not exceed their quotas. The 1983 agreement, without its economic provisions (which were suspended in 1989), has been extended until September 1994.

Impact of the 1983 ICA on the world coffee market

In 1989, a simulation model of world coffee markets for 1981 through 1986 was constructed at the World Bank.[66] The model showed that the quota system had a stabilizing effect on world coffee prices in the 1981-84 period. Projecting a world coffee market with and without the export quota system, the study found that without quotas, prices would have fallen substantially in the early 1980s, but would have increased in 1985 and 1986 as production and exports declined in response to earlier low prices.

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[64] Donna U. Vogt, *International Coffee Agreement: A Status Report*, Congressional Research Service, Mar. 22, 1990. Much of the following section is drawn from this report.

[65] Membership totals reflect conditions as of Mar. 1993.

[66] Akiyama, Takamasa and Panayotis N. Varangis, *Impact of the International Coffee Agreement's Export Quota System on the World's Coffee Market*. World Bank. Working Paper Series 148, Feb. 1989.

The extent of benefits varied from country to country in the simulation model. Low-cost producers (Costa Rica, Indonesia, Philippines, Papua New Guinea) could have more than compensated for lower world prices by increasing exports. High cost producers' earnings (Cote d'Ivoire, El Salvador, Ethiopia, and India) would have declined in the absence of quotas when coffee prices increased sharply due to a drought in Brazil, and export quotas were suspended. The study concluded that export quotas reduced export revenues for smaller exporting members of the ICA and that the two largest producers, Brazil and Colombia, would also have been net losers without quotas similar to the 1983 ICA.

World price fluctuations since the suspension of the ICA in July 1989

Since the suspension of export quotas under the International Coffee Agreement in July 1989, there has been a significant drop in the market price for coffee, from a 1988 composite price of near $2.54 per kilogram to a 1992 composite of below $1.18 per kilogram (figure 11). Export revenues from coffee by members of the International Coffee Organization fell in 1990 to $6.7 billion from $8.6 billion in 1989 and $14.3 billion in 1986, despite a significant increase in shipments. World coffee prices continue to be depressed following the ICA quota suspension (table 12). The ICO composite indicator price (1979 basis) continued its 5-year slide, falling to an annual 1992 average of $1.18 cents per kilogram.[67]

In the first half of 1990, robusta prices were about 40 percent less than Arabica prices, while in 1987 the difference was only 10 percent. This price difference, according to the World Bank, was as great as it has ever been since the early 1960s. Consumer preferences in major consuming countries have shifted away from the bitter, caffeine-rich robustas to mild Arabica coffees. Even traditional robusta importing countries such as France and Italy are importing more Arabicas. Larger quantities of Arabicas are also being used in instant coffees that have used robustas in the past. Consequently, the ICO composite indicator price for robusta coffee sank to a post quota suspension low of 86 cents per kilogram in May 1992, before increasing to just over 88 cents at yearend. By comparison Colombian Mild Arabica prices were $1.73 per kilogram at that time.

The Future of the ICA

Even without the economic provisions of the ICA, meetings and negotiations continue in an effort to revive them. Industry sources indicate that the chances of a quick reestablishment of quotas are very unlikely if not impossible. In June 1993, the ICO agreed to extend the current ICA for another year until September 30, 1994. The ICA continues without economic provisions; provides a forum for international cooperation on coffee matters, and also allows time for the negotiation of a new agreement. The United States notified the ICO on September 27, 1993, that it would not be acceding to the 1-year extension, and would no longer be a member of the ICO.[68]

The drop in prices following the collapse of the economic provisions in July 1989, while a short-term boon to the consumer countries, has created hardship in certain producing countries, some of which are almost totally dependent on coffee for their export earnings. As returns on coffee production fall, inputs such as fertilizers and fungicides are reduced and supplies and quality are adversely affected. Under these conditions, neither consuming or producing country objectives are met.

Tea

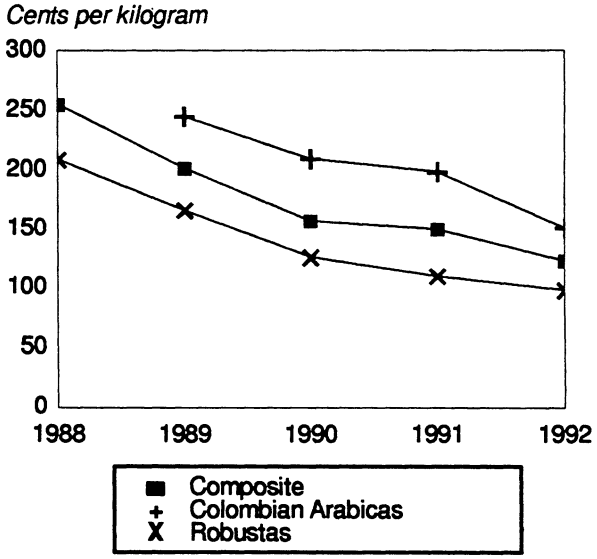
Similar to coffee, tea plays a significant role in the economies of many developing countries. USDA estimates that tea is the largest foreign exchange earner for both Kenya and Sri Lanka and that tea is a major component of the agricultural economies of India, Indonesia, Malawi, China, and Argentina.

Unlike coffee, tea-producing and-consuming countries have never been able to agree on prices and objective quality standards. This lack of consensus has

[67] The International Coffee Organization keeps track of two major world coffee price indicators, "Other Mild Arabicas" and "Robustas," and averages the ex-dock price of each in New York and Bremen/Hamburg to determine the ICA composite price.

[68] USDA/FAS, *World Coffee Situation*, Dec. 1993.

Figure 11
ICO composite indicator prices: traded type differential, 1988-92



1979 ICA Basis.

Source: International Coffee Organization.

Table 12
Coffee: Average prices on the New York market, by types, 1988-92

(Per kilogram)

Type	1988	1989	1990	1991	1992
Colombian Mild Arabicas	$2.98	$2.36	$2.13	$1.98	$1.50
Other Mild Arabicas	2.69	2.36	1.97	1.87	1.40
Brazilian and other Arabicas	2.69	2.18	1.83	1.61	1.24
Robustas	2.10	1.67	1.21	1.10	.96
Composite	2.56	2.02	1.58	1.47	1.18

Source: International Coffee Organization.

undermined efforts to establish an international tea organization similar to the ICO with quotas based on trigger prices and tea types.

World Production

World tea production has increased gradually each year since 1980 and reached a new record in 1990 of 2.54 million metric tons (table 13). However, drought conditions in major tea-producing countries helped contribute to the reduced 1992 tea crop of 2.42 million metric tons. Despite the general trend toward increased world production of tea, world trade in tea remains relatively flat. Asian countries dominate both world tea production and its exports (figures 12 and 13).

World tea exports for 1991 declined to near 1.1 million metric tons, or approximately the 4-year average during 1988-91.[69] Slow export growth in 1991 is consistent with the falling consumption trend in the large United Kingdom market over the past decade, reflecting changing consumer tastes and strong competition from other beverages. Slow export growth was expected again in 1992, stemming from the drought conditions in many of the key tea-producing countries.

World tea production and consumption have historically been in close balance with supplies running slightly ahead of demand. A comparison of export/production ratios implies that significantly more tea is consumed in the domestic market and therefore not exported, than is the case for coffee (figure 14).

Major Producers

Asia

The Asian region, led by India, China, and Sri Lanka, produced about 86 percent of the world's tea in 1992, a percentage consistent over time since 1988. The region was responsible for 70 percent of world exports in 1992, down slightly since 1988.

[69] International Tea Committee, *Annual Bulletin of Statistics: 1992*, London, 1992 p.45. Data for 1992 were not available at time of publication.

India

Reflecting favorable market prices and good growing conditions, India harvested a record crop of 741,719 metric tons of tea in 1991. However, India's 1992 crop was adversely affected by dry weather, and production dropped 5 percent to about 704,000 metric tons. There are about 13,500 tea estates in India covering an area of 420,000 hectares. Most tea estates in Northeast India are large (over 100 hectares) while in South India there is a preponderance of small tea estates with an area generally less than 8 hectares.

The traditional Chinese tea varieties grown in India are now being gradually replaced by higher-yielding Assam clones developed at Indian tea research institutes. CTC and orthodox black and green teas are the major tea types produced with the relative share of each averaging 71 percent, 28 percent, and 1 percent, respectfully. While CTC tea is mostly for domestic consumption, orthodox, green teas, and the small production of instant teas are for export. India's domestic tea consumption, which has been expanding at an annual rate of nearly 5 percent, increased to approximately 500,000 metric tons in 1990. Production, on the other hand, only increased by 3.1 percent in the same year, raising questions about India's long-term ability to satisfy its domestic consumption needs and meet export goals.

Sri Lanka

Sri Lanka harvested a record tea crop of 241,552 metric tons of tea in 1991 and shipped 215,600 metric tons to overseas markets, replacing India as the world's largest tea exporter for the second time since 1986. However, in 1992 Sri Lanka's production was only 179,000 metric tons as a result of drought conditions in the growing regions. The total area under tea cultivation in 1990 was estimated at 221,758 hectares, of which approximately 45 percent of the total was managed and controlled by the private sector. Sri Lankan yields per hectare are comparatively low in part because over 50 percent of Sri Lankan tea plants are over 70 years old.[70]

[70] USDA/FAS.

Table 13
Tea: World production, by major producing countries, 1988-92

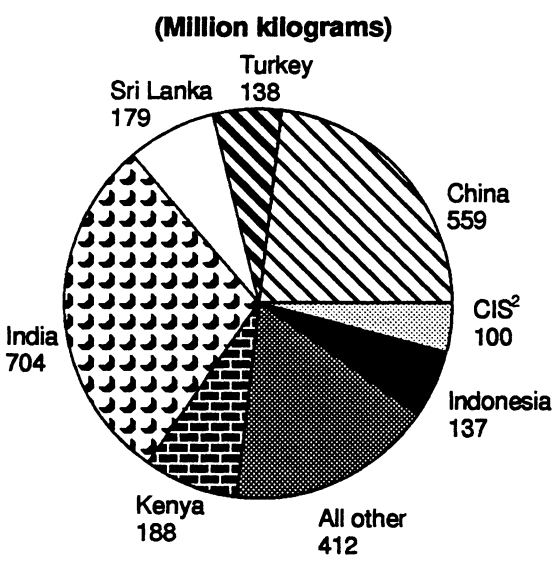
(1,000 metric tons)

Region and Country	1988	1989	1990	1991	1992
Asia and Oceania:					
India	700	684	715	742	704
China	545	535	540	542	559
Sri Lanka	228	208	233	242	179
Turkey	153	136	131	139	138
Indonesia	134	141	150	133	137
CIS	(1)	(1)	(1)	110	100
All other	383	381	390	252	254
Subtotal	2,143	2,085	2,159	2,146	2,071
Africa:					
Kenya	164	181	197	204	188
Malawi	40	40	39	41	28
Tanzania	15	17	18	19	17
Zimbabwe	17	18	17	16	8
All other	45	47	50	53	46
Subtotal	281	303	321	333	287
South America:					
Argentina	44	48	50	44	40
Brazil	14	15	15	10	15
All other	4	4	4	4	4
Subtotal	62	67	69	58	59
Grand total	2,486	2,454	2,549	2,537	2,417

[1] Not available.

Source: Compiled from USDA and International Tea Committee data.

Figure 12
Tea: World production, by selected countries, crop year 1992[1]

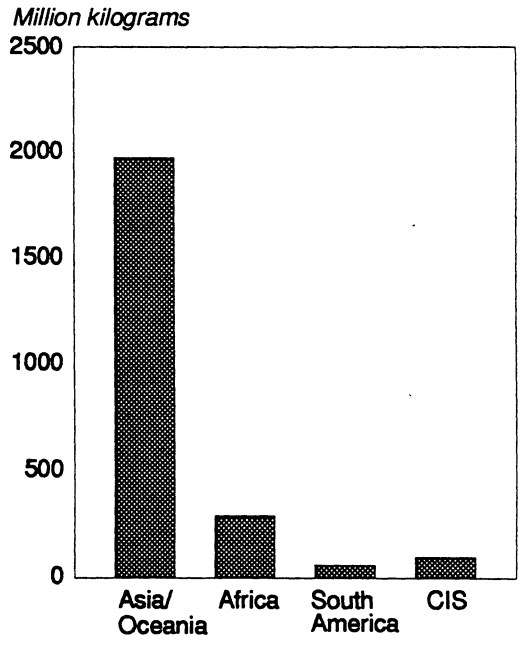


[1] Preliminary.

[2] Commonwealth of Independent States.

Source: FAS/USDA.

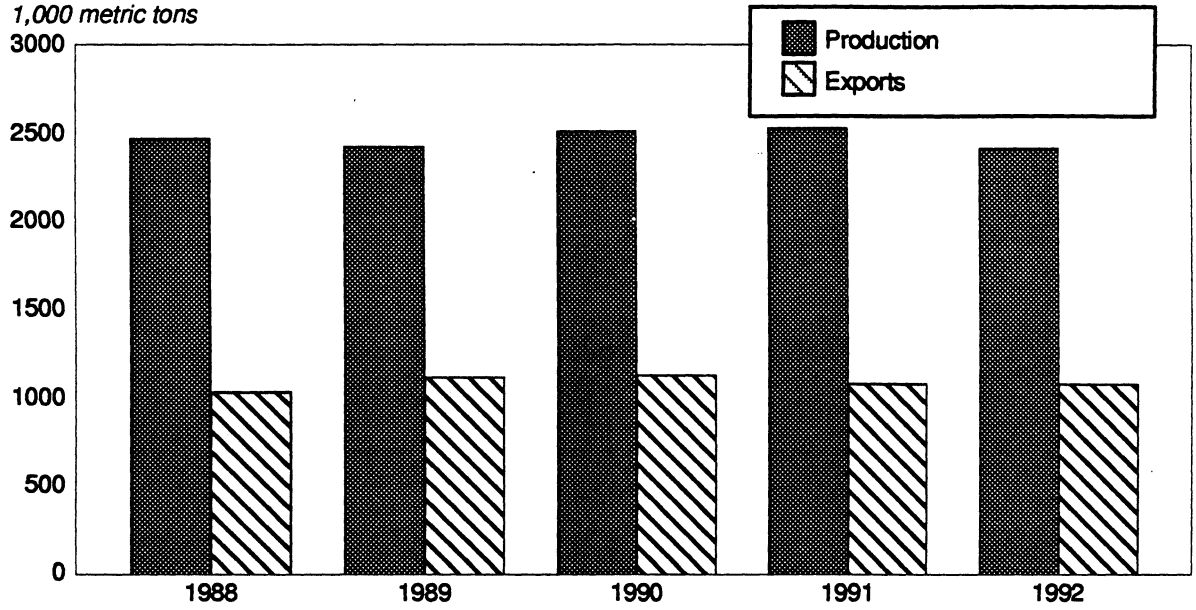
Figure 13
Tea: World production, by regions, 1992



Note.—Total World Production, 2,417 million kg.

Source: International Tea Committee.

Figure 14
Tea: World production and exports, 1988-92



Source: International Tea Committee.

Foreign exchange earnings from tea in 1990 totaled $480 million, compared with $332 million a year earlier, placing tea behind textiles and garments as the most important export earner. United Nations' data indicated that for 1987/88, tea exports accounted for nearly 26 percent of the total value of Sri Lankan exports. Unlike India, where a large percentage of its tea production is for domestic consumption, most of Sri Lanka's tea production is for the export market.

Domestic consumption of tea in Sri Lanka in calendar year 1990 was about 21,200 metric tons (India's by comparison was 500,000 metric tons). Sri Lanka's per capita consumption during recent years is estimated at 1.25 kilograms a year, which includes tea purchased through regular channels, as well as tea diverted by plantation workers in the field, at the factory, or in the distribution system. Tea is the least costly and most popular beverage in Sri Lanka, half the cost of coffee and one-fourth the cost of a soft drink.

China

After the record tea production of 545,000 metric tons in 1988, China's tea industry has been in a slump, reflecting poor domestic and international economic conditions. Production in 1992, though, rebounded to an estimated 559,000 metric tons. Domestic demand has been falling because of the growing preference for tea bags, which use less tea than brewing loose tea, and the increased popularity of soft drinks, beer, and other beverages. The government has also been reducing prices to growers which has discouraged production. Chinese tea exports declined in 1991 for the third consecutive year. China, however, remained the largest supplier of tea by weight to the U.S. market in 1992, accounting for about one fourth of U.S tea imports by volume.[71]

Indonesia

Indonesian tea production has been traditionally characterized by a large percentage of state-owned estates.[72] In an effort to move toward more involvement by the private sector, the Government in the 1980s began to actively support the expansion of small holder production through aid from state-owned tea estates. Estates provide extension services and high-yielding seedlings to smallholders and provide credit and offer lease agreements to processors for use of their factories to process smallholder tea production.[73]

Black teas dominate the Indonesian industry, with production of green tea accounting for less than a third of the output. Green tea production is mostly by small land holders and is usually processed as jasmine tea for the local market.

[71] USDA/FAS, *World Tea Situation*, May 1993, p.12.
[72] State-owned estates produced nearly 60 percent of total Indonesian tea production in 1991.
[73] USDA/FAS, *World Tea Situation*, May 1993, p. 5.

Tea consumption is gradually on the increase in Indonesia, with per capita consumption now estimated to range between 0.25 and .30 kilogram a year. Tea is consumed in a variety of forms, including bags, bottles, and ready-to-drink cartons. It is the traditional beverage served at meetings, social events, and with meals. Although Indonesians prefer green tea, the popularity of black tea has been increasing in recent years, particularly in the urban areas. Recent development of flavored tea products could further boost per capita consumption in the future.

Estate production usually accounts for 85 percent of the export trade. Shipments to the United States in 1992 were 16,400 metric tons, an increase from 1991 shipments of 13,500 metric tons, maintaining Indonesia as the third largest tea supplier by weight to the U.S. market after China and Argentina.

Africa

African tea production in 1992 fell to 286,600 metric tons, the lowest production level since 1988. Until 1992, tea production had increased yearly on the continent, increasing from 281,400 metric tons in 1988 to 331,400 metric tons in 1991, an increase of almost 18 percent. Of the African tea-producing countries, only Uganda experienced an increase in production in 1992. Kenya, the largest African tea-producing nation, experienced a nearly 8 percent decrease in production as a result of unfavorable growing conditions that affected tea production through Africa. During the period 1988 through 1992, African tea production as a percentage of world production has stayed around 11 to 13 percent. Kenyan production alone supplied between 6 and 8 percent of world production during this time.

Kenya's tea production in 1991 reached a record 203,589 metric tons, ranking it as the world's fourth largest tea producer and by far the largest in Africa. Despite the drop in 1992 production to 188,100 metric tons, Kenya became the world's third largest tea producer, moving ahead of Sri Lanka, which also experienced production problems in 1992. The Kenyan economy relies heavily on the agricultural sector for export earnings. The Foreign Agricultural Service reports that by 1989 tea had replaced coffee as the leading agricultural commodity export, earning approximately 27 percent of the value of Kenya's total commodity exports. In the absence of a support mechanism for coffee prices, tea is likely to remain preeminent in this category.

Kenyan tea is grown under rain-fed conditions in high altitude areas which do not require irrigation. Total harvested area in Kenya is estimated at 90,500 hectares. Approximately 55 percent of tea production is from smallholders and the Nyayo tea zones, which started production in 1986. The remaining 45 percent of production is from large tea estates.

Kenyan tea is sold by auction and by private contract. The government requires that at least half of the total crop be sold through an auction system. In 1989, 60 percent of sales were at the Mombasa (Kenya) auction. Most of Kenya's exports in 1992 went to the United Kingdom, Pakistan, and Egypt, with small amounts going to the United States.

South America

Argentina and Brazil produced over 92 percent of the South American tea in 1992. Even though South America accounted for under 3 percent of world production, Argentina has been a leading tea exporter to the United States. The United States imported more black tea from Argentina than from any other country in 1985-90. Argentina exported nearly 22,000 metric tons of tea to the United States in 1992, or 25 percent of total U.S. imports. Brazil exported 3,679 metric tons to the United States in 1992, over 98 percent of it black tea.

World Price Fluctuations

Small tea purchases by Russia and the other Commonwealth of Independent States' members from the international market place contributed to a trend of falling world tea prices during 1991. Prices in 1992 strengthened as a result of an overall 5 percent reduction in world tea production. However, large quantities of low-quality teas on the market have kept prices down, as well as continued reduced purchases by Russia. London auction prices for all teas in 1992 averaged $2.01 kilogram, a drop from the 1990 average price of $2.03, but still above the depressed 1987 level of $1.71 per kilogram (table 14).[74]

TRADE MEASURES: COFFEE

Article 48 of the International Coffee Agreement of 1983, "Removal of Obstacles to Consumption," states as a first assumption: "Members recognize the utmost importance of achieving the greatest possible increase of coffee consumption as rapidly as possible,

[74] The prices quoted for the purposes of this report come from the London auction. Though auctions held in the producing countries have become increasingly important in the last decade, the USDA continues to use the London auction figures for the sake of consistency.

Table 14
Tea: Average London auction prices, 1988-92

(Per kilogram)

	1988	1989	1990	1991	1992
Price	$1.79	$2.01	$2.03	$1.85	$2.01

Source: International Tea Committee.

in particular through the progressive removal of any obstacle which may hinder such increase." Tariffs on green coffee have declined and in many instances have been eliminated. As of the end of 1990, ICO members with zero tariff rates on coffee included the United States, Sweden, and Singapore. Progressive tariffs, however, are as a rule still applied to processed coffee.

Foreign Tariff and Nontariff Measures

Table 15 summarizes the tariff situation at the end of 1990 for those members of the ICO with tariffs on coffee, by the principal tariff categories. The list is not exhaustive and is subject to change. Details of specific internal taxes on coffee levied by importing member countries of the ICO, as of January 1, 1991, are provided in table 16.

U.S. Tariff and Nontariff Measures

Coffee in raw, roasted, ground, and instant forms enters the United States duty free. Coffee substitutes containing coffee (HTS item 0901.40.00) and preparations with a basis of coffee extracts, essences, or concentrates or with a basis of coffee (HTS item 2101.10.40) are dutiable. Table 17 shows the general and special column 1 rates of duty applicable to U.S. imports of coffee and tea as of January 1, 1993. In addition, the table shows U.S. exports and imports of coffee and tea, by HTS item, during 1992.

Imports of soluble or instant coffee provided for under HTS subheading 2101.10.21, if the product of the EU, are subject to an import duty of 100 percent ad valorem (HTS subheading 9903.23.20).

Small amounts of soluble or instant coffee are mixed with sweeteners and whitening agents and marketed as liquid concentrates used for flavoring and beverage purposes. These products are minor items in the domestic and foreign trade of the United States. However, the United States does levy a Most Favored Nation (MFN) rate of 10 percent (the GSP rate is duty free) on mixtures (preparations based on coffee or coffee extracts).

The recently completed (December 1993) GATT Uruguay Round of trade negotiations may result in further reductions in U.S. and foreign duties on the articles covered by this summary. The Uruguay Round schedule of U.S. concessions was not available when this summary was prepared.

The North American Free Trade Agreement (NAFTA), as implemented by the North American Free Trade Agreement Implementation Act (Public Law 103-182, approved Dec. 8, 1993), provides for the phase out of U.S. duties over a 10-year period beginning January 1, 1994, on the dutiable coffee items included in this summary which are imported from Mexico. Mexico is obligated to phase out its duties on imports of such goods from the United States over a 10-year period, also beginning January 1, 1994.

TRADE MEASURES: TEA

Foreign Tariff and Nontariff Measures

In recent years there has been a trend in both producing and consuming countries toward the dismantling of export and import duties on tea and tea products. For the producing countries, the dismantling of export duties has occurred as competition for export markets has increased from beverages such as soft drinks, fruit juices, and coffee. International Tea Committee data from 1992 show that with the exception of Sri Lanka, producing countries have generally abolished export duties on tea. However, most of these countries impose import duties or require import licenses, and tax domestic consumption. Tax assessments on the domestic markets include a whole range of tea cesses (taxes), value added, excise, and sales taxes.

Consuming countries have lowered import duties largely as a result of pressures by developing countries for freer trade and "trade not aid" policies. Overall, import duties in consuming countries range from 0 to 90 percent ad valorem, compounded by additional duties and taxes. Canada, Australia, most of the European Free Trade Agreement (EFTA) countries, and the United States currently have no tariffs on imports of tea or tea products.

U.S. Tariff and Nontariff Measures

Imports of crude or prepared tea enter the United States free of duty. All immediate containers and wrappings, and all intermediate containers of crude or prepared tea in packages of less than 2.3 kilograms net weight each are dutiable at the rates for such containers and wrappings if imported empty.[75] Imports of impure tea are prohibited,[76] except those which are used in the manufacture of theine, caffeine, or other chemical products; such tea may be imported under bond, free of duty.[77] Iced tea mixes containing sugar derived from sugarcane or sugar beets are listed under subheadings 9904.50.20, 9904.50.40, or 9904.60.60 and are subject to import quotas under section 22 of the Agricultural Adjustment Act (7 U.S.C. 624).

The recently completed (December 1993) GATT Uruguay Round of trade negotiations may result in further reductions in U.S. and foreign duties on the articles covered by this summary. The Uruguay Round schedule of U.S. concessions was not available when this summary was prepared.

The North American Free Trade Agreement (NAFTA), as implemented by the North American Free Trade Agreement Implementation Act (Public Law 103-182, approved Dec. 8, 1993), provides for the

[75] Additional U.S. Note 4 to Chapter 9, HTS.
[76] Additional U.S. Note 5 to Chapter 9, HTS.
[77] Tea, tea waste, and tea siftings and sweepings used in the manufacture of caffeine, theine, and other chemical products, classified in HTSUS item 9814.00.50, are not included in this summary.

Table 15
Coffee: Tariffs applied to coffee in specified International Coffee Agreement importing member countries[1]

Harmonized system code	Description	Category	Austria	Canada	Cyprus	EU[2,3]	Fiji	Finland	Japan	Norway	Switzerland
0901.11	Coffee, raw or unroasted, not decaffeinated	MFN	8%B	0%B	0%	4%	50%	3%	0%B	0%B	0.50B
		GSP	0%	(4)	0%	(4)	50%	(4)	(4)	(4)	0.44
0901.12	Coffee, raw or unraosted, decaffeinated	MFN	12%B	0%B	0%	10%	50%	3%	0%B	0%B	0.76B
		GSP	0%	(4)	0%	8.5%	50%	(4)	(4)	(4)	0.55[5]
0901.21	Coffee, roasted, not decaffeinated	MFN	15%B 19.5%B[6]	4.41¢/kg B	36%	12%	50%	7.7%	20%B	Cr.n.	0.90B
		GSP	6% 7.8%[6]	0%	28%	11.5%	50%	(4)	10%	0.45/kg 0%	0.55[5]
0901.22	Coffee, roated, decaffeinated	MFN	15%B 19.5%B[6]	4.41¢/kg B	36%	15%	50%	7.7%	20%B	Cr.n.	0.90B
		GSP	6% 7.8%[6]	0%	28%	12.5%	50%	(4)	10%	0.45/kg 0%	0.55[5]
2101.10	Extracts, essences and concentrates of coffee (including instant coffee)	MFN	12%B 15.6%B[9] S24.5/kgU[10]	15.43¢/kg U	39.9% + 4.4%[7]	18%B	50%	5.6%	12.3%[8]	0%	2.60B
		GSP	4% 5.2%[9] S9/kg[10]	0%	29.2% + 3.1%[7]	9%	50%	0%	(4)	(4)	1.50

[1] The Bound tariff rate (commitment not to raise the tariff) is represented by "B"; the Unbound rate is represented by "U"; Most Favored Nation treatment is represented by "MFN"; and countries benefitting from the General System of Preferences are represented by "GSP".

[2] Spain and Portugal will levy differing rates under transitional arrangements in 1991 but the common EU rates are from 1 January 1992.

[3] The following categories of countries are exempt from tariffs on all types of coffee:

— Members of the ACP Group of countries

— Least developed countries as defined by the United Nations

— Bolivia, Colombia, Ecuador, and Peru until 1 January 1995.

[4] Not applicable.

[5] Not applicable to Brazil.

[6] In retail packs under 5 kg.

[7] The first figure is the tariff, the second is a "temporary tourist levy." The figures in the table apply to bulk imports; imports in retail packs are at 48.7% + 4.4% MFN and 36.5% + 3.1% GSP.

[8] Instant coffee is 12.3%; other extracts or essences 17.5%.

[9] In retail packs not exceeding 1 kg; solid coffee extracts.

[10] Liquid coffee extracts.

Source: International Coffee Organization, "Obstacles to Coffee Consumption," Report by the Executive Director, Feb. 21, 1991.

Table 16
Coffee: Selective internal taxes on coffee

Type	Belgium/ Luxembourg (BF/kg)	Denmark (DKr/kg)	Germany (DM/kg)	Italy (Lit/kg)	Portugal (Esc/kg)
Not roasted: regular	8	4.35	3.60	2,050	1.80
Not roasted: decaffeinated	8	4.35	3.80		1.80
Roasted: regular	10	5.22	4.30	2,563	6.70
Roasted: decaffeinated	10	5.22	4.55		6.70
Extracts: regular	28	13.05	9.35	6,150	10.00
Extracts: decaffeinated	(1)	(1)	9.90	(1)	(1)

[1] Not applicable.

Source: International Coffee Organization, "Obstacles to Coffee Consumption," Report by the Executive Director, Feb. 21, 1991.

phase out of U.S. duties over a 10-year period beginning January 1, 1994, on the dutiable tea items included in this summary which are imported from Mexico. Mexico is obligated to phase out its duties on imports of such goods from the United States over a 10-year period, also beginning January 1, 1994.

U.S. TRADE BALANCE

The U.S. trade deficit in coffee and tea during 1988-92 has declined by over $800 million from about $2.5 billion to just over $1.7 billion (table 18). The drop in the deficit reflected the general fall in world coffee and tea prices since 1988 rather than any significant increase in U.S. exports. U.S. coffee and tea exports are minimal compared to world totals. Brazil, Colombia, and Mexico accounted for over 56 percent of the total deficit in 1992; and Canada was the market for over 60 percent of U.S. exports.

Table 17
Coffee and tea: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; U.S. imports, 1992

HTS subheading	Description	Col. 1 rate of duty as of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special[1]		
				Thousand dollars	
	Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes containing coffee in any proportion:				
0901.11.00	Coffee, not roasted, not decaffeinated	Free		4,168	[2]1,462,061
0901.12.00	Coffee, not roasted, decaffeinated	Free		13,614	104,236
0901.21.00	Coffee, roasted, not decaffeinated	Free		68,468	[3]32,627
0901.22.00	Coffee, roasted, decaffeinated	Free		3,444	[4]12,686
0901.30.00	Coffee husks and skins	Free		0	149
0901.40.00	Coffee substitutes containing coffee	3.3¢/kg	Free (CA,E,IL,J)	420	156
	Tea:				
0902.10.00	Green tea (not fermented) in immediate packings of a content not exceeding 3 kg	Free[5]		703	2,002
0902.20.00	Other green tea (not fermented), flavored	Free[5]		1,423	5,347
0902.30.00	Black tea (fermented) and partly fermented tea, in immediate packings of a content not exceeding 3 kg	Free[5]		6,751	14,849
0902.40.00	Other black tea (fermented) and other partly fermented tea	Free[5]		3,526	108,555
0903.00.00	Maté	Free			
1211.90.40	Mint leaves, fresh or dried, as herbal teas and herbal infusions	7.5%	Free (A,CA,E,IL,J)	2,147	179
1211.90.80	Plants and parts except mint leaves, used as herbal teas	Free		([6])	8,469
	Extracts, essences and concentrates, of coffee, tea or maté and preparations with a basis of these products or with a basis of coffee, tea or maté; roasted chicory and other roasted coffee substitutes, and extracts, essences and concentrates thereof:				
2101.10.20	Extracts, essences and concentrates, of coffee, soluble or instant coffee, decaffienated or not decaffienated	Free[7]		30,990	[8]80,217
2101.10.40	Preparations with a basis of coffee extracts, essences, or concentrates or with a basis of coffee	10%	Free (A,E,IL,J) 5% (CA)	([9])	[10]202
2101.20.20	Extracts, essences and concentrates, of tea or maté	Free		[11]12,456	7,928
2101.20.40	Preparations with a basis of tea or maté extracts, essences or concentrates or with a basis of tea or maté	10%	Free (A,CA,E,IL,J)	([12])	[13]23,892
2101.30.00	Roasted chicory and other roasted coffee substitutes and extracts, essences and concentrates thereof	3.3¢/kg	Free (CA,E,IL,J)	652	3,142
2106.90.60	Mixed herbal teas and herbal infusions of mixed herbs	10%	Free (A,E,IL,J) 5% (CA)	52,623	7,887

See footnotes at end of table.

Table 17—Continued
Coffee and tea: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1993; U.S. exports, 1992; U.S. imports, 1992

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

[2] Includes 0901.11.00.10 and 0901.11.00.90.

[3] Includes 0901.21.00.30 and 0901.21.00.60.

[4] Includes 0901.22.00.30 and 0901.22.00.60.

[5] Imports under these subheadings are subject to an examination fee of 3.5¢ per hundred weight or fraction thereof (21 U.S.C. 46a).

[6] Exports included in those for HTS 1211.90.40.

[7] See subheading 9903.23.20. Soluble or instant coffee (containing no admixture of sugar, cereal or other additive).

[8] This subheading total includes 2101.10.20.25 and 2101.10.20.30 and 2101.10.20.40. Imports of certain preparations containing sugar are subject to absolute import quotas imposed pursuant to section 22 of the Agricultural Adjustment Act. See items 9904.50.20, 9904.50.40, and 9904.60.60.

[9] Exports included in those for HTS 2101.10.20.

[10] Includes 2101.10.40.60 and 2101.10.40.80.

[11] This figure is an aggregate drawn from domestic exports under subheading 2101.20.

[12] See export figure listed under subheading 2101.20.40.

[13] Includes 2101.20.40.40, 2101.20.40.60 and 2101.20.40.80.

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

Table 18
Coffee and tea: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1988-92[1]

(In millions of dollars)

Item	1988	1989	1990	1991	1992
U.S. exports of domestic merchandise:					
Brazil	0	0	0	0	0
Colombia	0	0	0	0	0
Mexico	0	0	1	3	2
Guatemala	0	0	0	0	0
Canada	41	42	46	55	82
El Salvador	0	0	0	0	0
Costa Rica	0	0	0	0	0
Germany	3	3	2	0	2
Peru	0	0	0	0	0
Ecuador	0	0	0	0	0
All other	42	56	47	44	49
Total	85	101	95	102	135
U.S. imports for consumption:					
Brazil	635	476	352	433	297
Colombia	434	380	323	347	414
Mexico	297	501	338	333	252
Guatemala	103	169	187	155	147
Canada	32	33	33	32	40
El Salvador	141	105	86	85	94
Costa Rica	48	50	46	67	58
Germany	64	65	61	67	63
Peru	66	69	43	56	33
Ecuador	107	114	65	51	37
All other	677	601	512	357	404
Total	2,605	2,563	2,045	1,986	1,839
U.S. merchandise trade balance:					
Brazil	-635	-476	-352	-433	-297
Colombia	-434	-380	-323	-347	-414
Mexico	-297	-501	-337	-330	-250
Guatemala	-103	-169	-187	-155	-147
Canada	9	9	13	23	42
El Salvador	-141	-105	-86	-85	-94
Costa Rica	-48	-50	-46	-67	-58
Germany	-61	-62	-59	-67	-61
Peru	-66	-69	-43	-56	-33
Ecuador	-107	-114	-65	-51	-37
All other	-635	-545	-465	-313	-308
Total	-2,520	-2,462	-1,950	-1,884	-1,704

[1] Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. U.S. trade with East Germany is included in "Germany" but not "Eastern Europe".

Source: U.S. Department of Commerce.

APPENDIX A
EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS

APPENDIX A
TARIFF AND TRADE AGREEMENT TERMS

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

Rates of duty in the ***general*** subcolumn of HTS column 1 are most-favored-nation (MFN) rates; for the most part, they represent the final concession rate from the Tokyo Round of Multilateral Trade Negotiations. Column 1-general duty rates are applicable to imported goods from all countries except those enumerated in general note 3(b) to the HTS, whose products are dutied at the rates set forth in ***column 2***. Goods from Albania, Armenia, Belarus, Bulgaria, the People's Republic of China, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Poland, Russia, Slovakia, and the Ukraine are currently eligible for MFN treatment. Among articles dutiable at column 1-general rates, particular products of enumerated countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the ***special*** subcolumn of HTS column 1. Where eligibility for special tariff treatment is not claimed or established, goods are dutiable at column 1-general rates.

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 and renewed in the Trade and Tariff Act of 1984, applies to merchandise imported on or after January 1, 1976 and before July 4, 1993. Indicated by the symbol "A" or "A*" in the special subcolumn of column 1, 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 3(c)(ii) 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; this tariff preference program has no expiration date. Indicated by the symbol "E" or "E*" in the special subcolumn of column 1, 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 3(c)(v) to the HTS.

Preferential rates of duty in the special subcolumn of column 1 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 3(c)(vi) of the HTS. Where no rate of duty is provided for products of Israel in the special subcolumn for a particular provision, the rate of duty in the general subcolumn of column 1 applies.

Preferential rates of duty in the special subcolumn of column 1 followed by the symbol "CA" are applicable to eligible goods originating in the territory of Canada under the ***United States-Canada Free-Trade Agreement*** (CFTA), as provided in general note 3(c)(vii) to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn of column 1 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 in 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 3(c)(ix) to the HTS.

Other special tariff treatment applies to particular ***products of insular possessions*** (general note 3(a)(iv)), goods covered by the ***Automotive Products Trade Act*** (APTA) (general note 3(c)(iii)) and the ***Agreement on Trade in Civil Aircraft***

(ATCA) (general note 3(c)(iv)), and ***articles imported from freely associated states*** (general note 3(c)(viii)).

The ***General Agreement on Tariffs and Trade*** (GATT) (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) is the multilateral agreement setting forth basic principles governing international trade among its 111 signatories. The GATT's main obligations relate to most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national (nondiscriminatory) treatment for imported products; the GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, antidumping and countervailing duties, and other measures. Results of GATT-sponsored multilateral tariff negotiations are set forth by way of separate schedules of concessions for each participating contracting party, with the U.S. schedule designated as Schedule XX.

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