Industry & Trade Summary

Olives

USITC Publication 2636 (AG-15)
May 1993

OFFICE OF INDUSTRIES
U.S. International Trade Commission
Washington, DC 20436

UNITED STATES INTERNATIONAL TRADE COMMISSION

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PREFACE

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

This report on table olives 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 (AG-1)	November 1991	Live Sheep and Meat of Sheep
2462 (AG-2)	November 1991	Cigarettes
2477 (AG-3)	January 1992	Dairy Produce
2478 (AG-4)	January 1992	Oilseeds
2511 (AG-5)	March 1992	Live Swine and Fresh, Chilled, or Frozen Pork
2520 (AG-6)	June 1992	Poultry
2524 (AG-7)	August 1992	Fresh or Frozen Fish
2545 (AG-8)	November 1992	Natural Sweeteners
2551 (AG-9)	November 1992	Newsprint
2612 (AG-10)	March, 1993	Wood Pulp and Waste Paper
2615 (AG-11)	March 1993	Citrus Fruit
2625 (AG-12)	April 1993	Live Cattle and Fresh, Chilled, or Frozen Beef and Veal
2631 (AG-13)	May 1993	Animal and Vegetable Fats and Oils
2635 (AG-14)	May 1993	Cocoa, Chocolate, and Confectionery
2636 (AG-15)	May 1993	Olives

[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 report discusses key aspects of the global table olive industry during 1988-92. The products included in this summary are all styles of table olives.[1] The principal style of olive processed in the United States is the California style, which accounts for over one-half of domestic consumption and 20 to 35 percent of imports. Spanish-style olives account for 25 to 30 percent of consumption and 55 to 70 percent of table olive imports. Greek, Sicilian, oil-cured, dried, and frozen olives account for the remaining consumption and imports.

Characteristics of Olive Trees

Olives are the fruit of a subtropical, broad-leaved evergreen tree, which has been cultivated extensively in the Mediterranean area for millennia. Olives have two primary uses—they may be processed for food use (table olives) or they may be crushed for oil.[2] Most olive-producing countries primarily crush their olives into oil, whereas the United States processes over 95 percent of the fruit for table use.

Olive trees cultivated in California, where virtually all U.S. production occurs, take 5 to 7 years to become commercially bearing. Most of the olives grown in the United States are table varieties, the fruit of which is generally larger and has a lower oil content than oil varieties. Once the trees are established, they have been known to produce fruit for thousands of years. Olives tend to be an alternating crop, meaning a large fruit crop of olives is followed by a "short" or small crop. Thus, a sharp drop following a large crop is not uncommon in the olive industry as olive trees require time to recover from the stress of a heavy production year.

From 1976 to 1983, U.S. olive production showed strong alternating-year production patterns of heavy crops followed by light crops. For example, olive production was 51 percent smaller in 1979 than in 1978 and over 60 percent smaller in 1981 than in 1980. However, in the late 1980s, this pattern gave way to a 4-year cycle of 3 years of gradual increases in production, followed by a sharp drop in the fourth year (see figure 1). Improved management and tree care is cited by some U.S. Department of Agriculture (USDA) sources to explain at least part of this change in cyclical production.[3] Nonetheless, olive production seems to be once again following the strong alternating-year production pattern.

To be productive, the olive tree needs winter temperatures close to freezing in order to induce a state of vegetative rest. The olive tree can withstand low temperatures of 15 degrees Fahrenheit and below as long as (1) the cold temperatures are not sustained for many hours, (2) the tree is thawed slowly, and (3) the tree is not in the active growing period. During growth stages, cold temperatures can cause significant damage to secondary twigs and branches and even the trunk and main branches in severe cases. The tree withstands high summer temperatures and the lack of

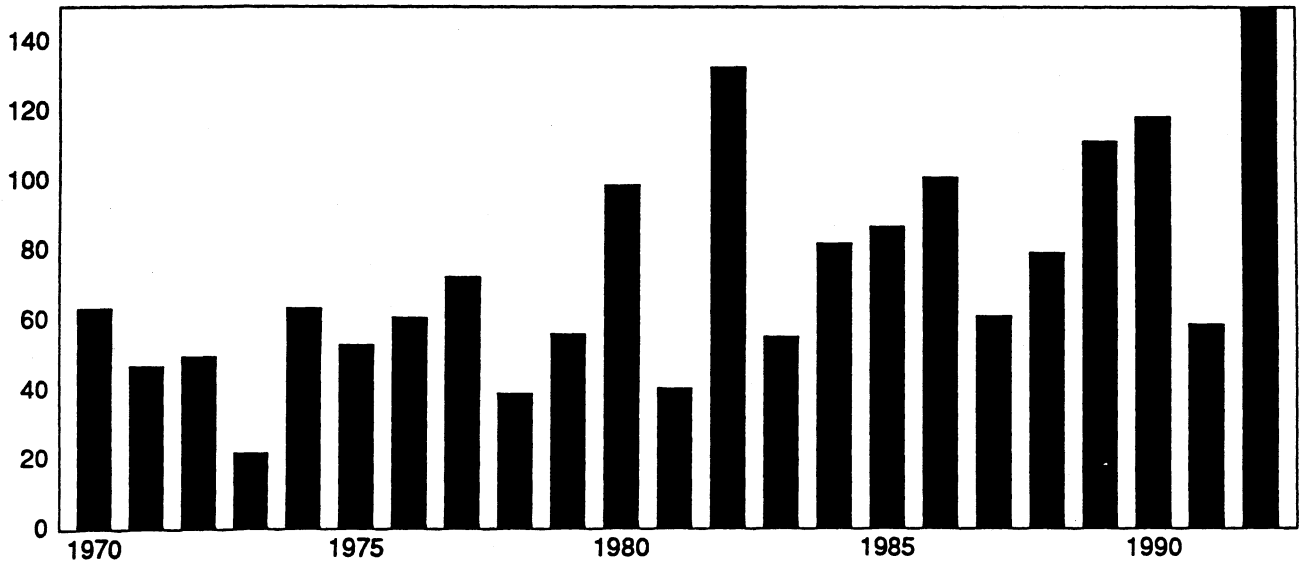
[1] The exception is olives prepared or preserved by vinegar or acetic acid, which will be included in the summary on processed vegetables. It is believed that olives of this type represent less than one percent of the industry.

[2] Olive oil will be included in the summary on animal or vegetable fats and oils.

[3] U.S. Department of Agriculture,Economic Research Service (ERS), *Fruit and Tree Nuts, Situation and Outlook Report*, Sept. 1991, p.16.

Figure 1
Olives: U.S. production (farm level), 1970–92

Thousands of metric tons



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

moisture well, although nearly all California trees are irrigated to ensure a more reliable crop.

In addition to the physiological damage that occurs to the olive tree after a deep freeze—tip burn, bark, wood, and leaf discoloration, defoliation, and damage to fruiting buds—the other primary concern is that cold temperatures may break the bark, allowing bacteria known as olive knot to enter through the wounds. The olive knot produces warty growths along the branch, eventually killing the branch and potentially the whole tree if not treated properly.[4]

The leading varieties of olives grown in California, in order of planted area are Manzanillo, Sevillano, Ascolano, and Mission. The Manzanillo is the most popular variety owing to its consumer-favored small fruit size and its relatively smaller tree height that facilitates harvesting. However, the Manzanillo is the most likely variety to incur long-term freeze damage, which occurs an average of once every 5 years in the Sacramento Valley.[5] This has led to some diversification of new plantings to include the Ascolano variety in the Sacramento Valley, in spite of the fruit's tendency to bruise and its larger size.

Production Processes

Olives are not consumed fresh because of their extreme bitterness, but instead they are processed in a variety of ways for table use as appetizers and condiments, in salads, or on pizza to add color and seasoning. Dried olives, freeze-dried olives, and quick-frozen olives are produced and used in small quantities by producers of dehydrated foods and soup mixes, and by producers of frozen foods, such as pizzas or Mexican and Italian entrees. Consumers prefer particular styles (color and flavor) of olives; such styles are primarily dependent upon the maturity of the fruit when harvested and the type of processing undertaken.

California-style olives are prepared from fully developed (but not ripe) olives, which are green to straw yellow in color when picked. The fruit is treated with a caustic solution to remove the bitter flavor, aerated to develop a dark color, packed in a mild salt solution, and heat processed in hermetically sealed airtight containers (canned) to destroy or inactivate micro-organisms that could cause spoilage. Such olives are deep brown or black in color when marketed, and they are generally known in the trade as canned ripe black olives.

Olives are not processed as California-style olives if they are from growers who do not participate in the marketing order or if the olives do not meet the marketing order[6] criteria for canning size (processed into whole or pitted olives) or limited size (processed as broken, sliced, wedged, or chopped olives). Instead, these olives may be crushed for oil, freeze dried, or placed in brine in anticipation of future processing as Spanish, Sicilian, or Greek-style olives.

Spanish-style olives, like California-style olives, are prepared from fully developed (but not ripe) fruit, which is green to straw yellow in color when harvested. The olives are first treated with a weak caustic solution of sodium or potassium hydroxide to remove most of the bitter flavor. After a series of rinses to wash away the caustic solution, the fruit is packed in casks, barrels, or vats, covered with salt brine, and fermented for a period extending from 2 to 12 months; the fruit is then ready for sale or packaging. Spanish-style olives are always green in color when marketed. Most Spanish-style olives are pitted, or pitted and stuffed with pimientos or other ingredients such as almonds or anchovies, before being marketed. Over the last 25 years, the pitting and stuffing of the olives by hand has been replaced with a mechanized process. Nearly all Spanish-style olives for retail sale are packed in glass bottles with a brine solution added.

Greek-style olives are usually prepared from fully developed olives, which are picked when red to black in color, though some may be prepared from unripe olives that are later aerated to develop a dark color. The olives are packed in vats or barrels containing a salt brine for 6 to 7 months. The olives are then sorted and packaged for consumer use in the same brine in which they were processed. Their color ranges from black (the most characteristic) to pale pink, and they have a somewhat bitter flavor. Such olives are often marketed as "ripe olives," whether or not they have been prepared from ripe fruit.

Sicilian-style olives are prepared from fully developed (but not ripe) olives that are picked when green in color. They are prepared in a manner similar to Greek-style olives and, likewise, have a somewhat bitter flavor. Sicilian-style olives are green in color when marketed and may be packed in glass bottles or in plastic buckets.

Oil-cured olives are prepared from olives that have been left on the tree to ripen until they are fully black. They are placed on racks with alternating layers of olives and rock salt and are turned once a week for about 1-1/2 months. The final product is a somewhat shriveled black olive with wrinkled skin. These olives are most often marketed to ethnic restaurants and delis.

U.S. INDUSTRY PROFILE

Industry Structure

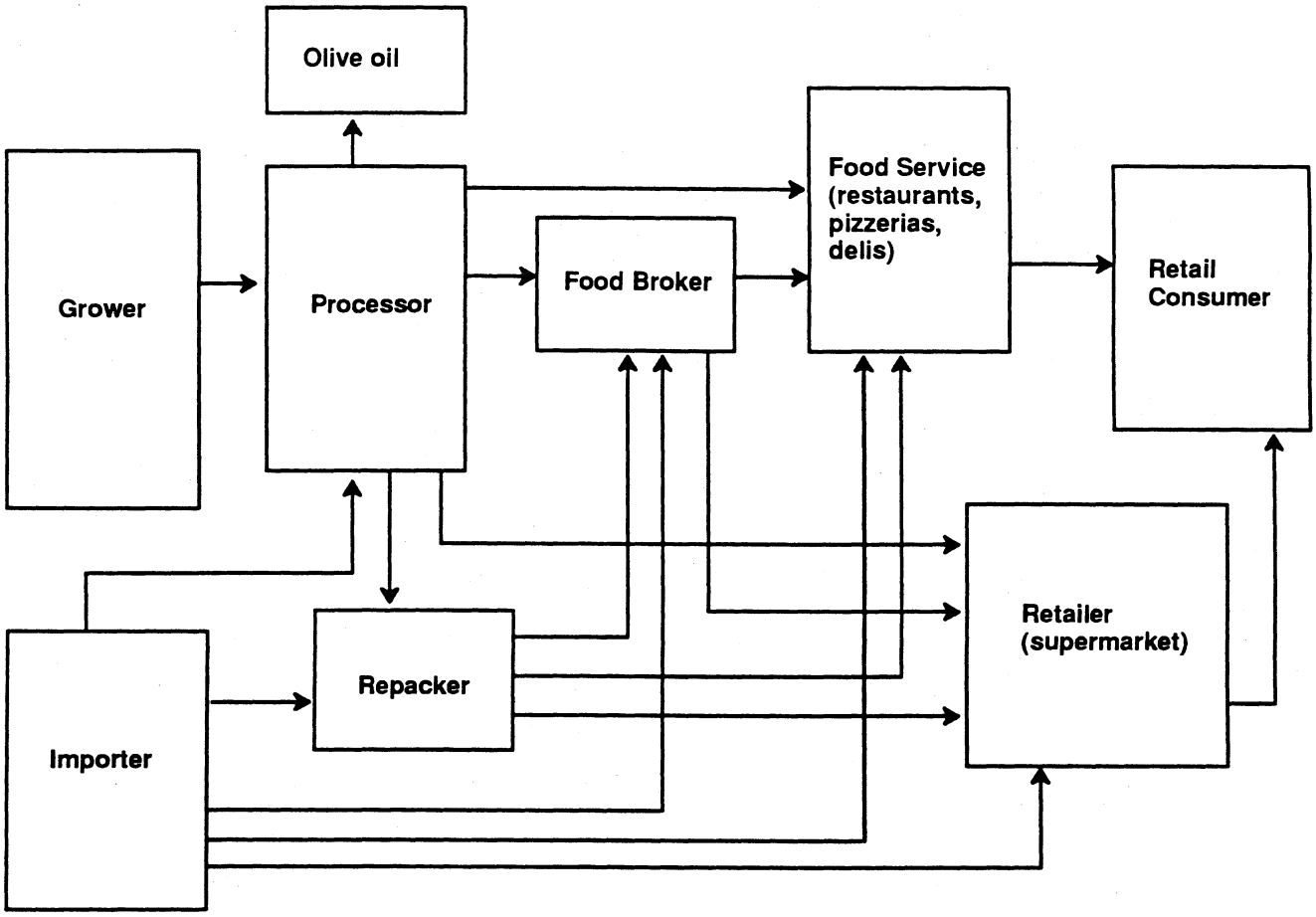
Figure 2 illustrates the structure of the olive industry in the United States. The Standard Industrial Classification categories applicable to the industry are 0179(pt.), Fruits and Tree Nuts, Not Elsewhere Classified; 2033(pt.), Canned Fruits and Vegetables; and 2034(pt.), Dehydrated Fruits, Vegetables, and Soups. Three types of production sectors, the U.S. growers of olives, the processors of domestically

[4] James O. Denney, George C. Martin, Rudi Kammereck, Delmer O. Ketchie, et al, "Freeze Damage and Coldhardiness in Olive: Findings from the 1990 Freeze," California Agriculture, vol. 77, No. 1, Jan.-Feb. 1993, special section.

[5] Ibid.

[6] See section on U.S. Government programs in this report.

Figure 2
Major distribution channels for table olives



Source: USITC staff.

grown olives, and repackers who sort and package bulk olives for distribution to retailers, compose the U.S. olive industry.

Number of Growers and Firms, Geographic Distribution, and Concentration of Firms

Growers

The approximately 1,400 olive growers[7] in California, who account for virtually all U.S. commercial production, harvested 12,200 bearing hectares[8,9] in 1992. The number of growers has remained relatively constant over the last 10 years while acreage has declined by 5 percent since 1988 and by 13 percent since 1981. The decline in area has resulted from growers substituting other crops that provide potentially higher or more stable grower returns. Commercial olive groves are almost exclusively in the fertile Sacramento and San Joaquin Valleys of California and, therefore, compete with many other perennial and annual fruit and vegetable crops for available land and water.

The average size of farms growing olives in California is close to 10 hectares. A substantial part of production is from growers whose primary crop and source of income is from olives. Olive growers typically employ a temporary labor pool of about 12,000 workers for the 4- to 6-week harvest period starting in late September.[10]

[7] Number of growers provided by the California Olive Committee.

[8] Bearing acreage numbers provided by U.S. Department of Agriculture, National Agricultural Statistics Service.

[9] 1 hectare = 2.471 acres.

[10] Submission of the California Olive Association to the USITC regarding USITC, *President's List of Articles Which May Be Designated or Modified as Eligible Articles for Purposes of the U.S. Generalized System of Preferences,* Report to the President on Investigations Nos. TA–131–17, 503(a)–22, and 332–312, USITC publication 2464, Dec. 1991.

Processors of Domestic Olives

Eight firms currently process olives directly from the field, down from 10 in 1988.[11] Five of these eight processors handle California-style olives, which are regulated under Federal marketing order 932 and covers over 80 percent of shipments of domestic olives. These five major processors, which include one cooperative and four independent firms, process over 95 percent of the domestic tonnage and employ approximately 1,600 year-round employees and nearly 4,000 seasonal employees during September through May.[12] Tri-Valley Growers, the grower-cooperative, accounts for about 15 to 20 percent of the domestic output. The independent processors are composed of both large multinational food companies and family operations, making characterizations of ownership difficult. In August 1990, the number of major olive processors decreased by one when Bell-Carter Foods, Inc. purchased Olives, Inc. In September 1992, Bell-Cater also purchased the brand name and inventory of Lindsay Olive Growers, a grower-owned cooperative that processed approximately 25 percent of the California olive crop. This purchase did not include the factory, which will be closed as a result of problems arising from declining profitability and environmental problems related to the effluent holding ponds built to hold the plant's briny waste.

In the late 1970s and early 1980s, U.S. processors made a concerted effort to compete in the pitted and stuffed Spanish-style olive market by investing heavily in technology and equipment. However, the U.S. processors were unable to compete with the lower priced imports, which, according to industry sources, resulted from the lower cost of foreign labor, less stringent environmental regulations found abroad, and alleged foreign government subsidies. As a result, the larger domestic packers have virtually abandoned this segment of the market.

Repackers of Olives

The primary function of repackers is to package bulk imported olives into containers for retail sale. Because most olives for food service and retail sales that are not California-style are packed in glass, which is relatively heavy, transportation costs are very important. These transportation costs give rise to repackers, who receive olives in bulk containers, typically 55-gallon barrels, process them (wash, sort, and add brine to them), and package them in retail and food service containers. The majority of these olives are imported. About 30 firms repack bulk olives in the United States.[13] Repacked consumption-ready olives primarily consist of Spanish-style olives in glass containers that are usually marketed as pitted olives with a strip of red pimiento pepper. Some firms repack Greek, Sicilian, and oil-cured olives that have been processed initially overseas or in the United States. Such firms are scattered throughout the country near major U.S. population centers. Most of these firms also engage in processing or packing other products, such as pickled peppers, pickles, pickled vegetables, and maraschino cherries.

The importer-repackers' role in the Spanish table olive market has been declining as more and more olives are now packed ready for consumption in Spain. Based on Spanish Customs Office data, 79 percent of the olives exported to the United States in 1990 were in consumer packs, compared with 61 percent in 1980.

Labor Skill Levels and Productivity

Yields per hectare and overall output of olives are influenced by the individual grower's management skills, proper timing of inputs such as irrigation, fertilization, and chemical spraying, as well as pruning techniques. However, weather is still the most influential factor affecting yield for any individual year. Olives are harvested by hand, a very labor-intensive process. The grower typically contracts with an independent labor broker, who brings a crew of pickers to harvest the crop. The harvest typically represents 50 percent of annual cash operating costs for the grower.[14]

Productivity at the grower level (as measured in terms of metric tons of olives per hectare) has been erratically increasing to levels over 12 metric tons per hectare. Although it may be misleading to look at a specific crop year as indicative of overall productivity, given the cyclical nature of olive production, the most recent 5-year average (1988-92) produced yields greater than the previous 5-year average (1982-87) (table 1). Yields most likely have been increasing as a result of better cultivation techniques, such as those described earlier, and the removal of less productive groves corresponding to the overall reduction of bearing acreage.

At the processing level, changes in machinery and handling have increased the processing speed for olives. Many of the processors now handle deliveries of the raw product in bulk containers. In this procedure, the field bins used to collect the olives in the orchards are sent directly to an official receiving station where large gondolas (5500-kilogram capacity) transport the fruit to the plant. This procedure allows field bins to be returned more quickly to the field, which, in turn, reduces the number of bins required for harvest by about 30 percent.

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[11] Edward E. Judge & Sons, Inc., *The Directory of the Canning, Freezing, Preserving Industries,* various editions, Westminster, MD, Edward E. Judge & Sons, Inc.

[12] Gary Oberti of the California Olive Association, transcript of USITC hearing, Washington, DC, Oct. 3, 1991, USITC, *President's List of Articles Which May Be Designated or Modified as Eligible Articles for Purposes of the U.S. Generalized System of Preferences,* Report to the President on Investigations Nos. TA-131-17, 503(a)-22, and 332-312, USITC publication 2464, Dec. 1991.

[13] *The Directory of the Canning, Freezing, Preserving Industries,* various issues.

[14] University of California at Tulare County Cooperative Extension, "Costs for Establishing and Producing Olives: Southern San Joaquin Valley – 1989."

Table 1
U.S. olive production, 1981-92

Crop-year	Bearing hectares	Production metric tons	Yield metric tons per hectare
1981	13,900	40,700	2.9
1982	14,200	132,900	9.4
1983	14,200	55,300	3.9
1984	14,500	82,200	5.7
1985	13,700	87,100	6.4
1986	13,300	101,200	7.6
1987	12,800	61,200	4.8
1988	12,700	79,400	6.2
1989	12,100	111,600	9.2
1990	12,300	119,300	9.7
1991	12,000	59,000	4.9
1992	12,200	149,700	12.3

Source: United States Department of Agriculture, National Agricultural Statistical Service.

Pitting and stuffing machines have been developed to pit more olives per minute while reducing the number of workers needed to monitor the procedure. In the California industry, there has been a move away from the super-fast machines to more flexible and accurate pitting machines. Although these particular machines pit more slowly at top speeds, they can be changed more quickly to handle the pitting of different sizes of olives while breaking fewer olives and leaving fewer pit fragments. Meanwhile, Spanish packers are emphasizing faster machines using machine-molded reconstituted pimiento peppers in order to further speed the stuffing process.[15]

Marketing Methods and Pricing Practices

Growers principally market their olives to either a grower-owned cooperative or an independent processor. Growers marketing their olives to independent processors sign a contract in the spring promising to deliver their fruit to the processors at the market price at the time of delivery. Processors usually announce their prices for the different size grades in September. Upon harvest, the growers bring their fruit to an official receiving station, where a sample of the delivery is graded to determine the percentages of (1) each size grade, (2) culls that do not meet size or quality requirements, and (3) garbage. The independent processor typically pays a percentage to the grower within a week of delivery to the plant, with the balance paid at the end of the season.

Growers that contract with a cooperative sell under a continuing agreement with the cooperative.[16] The cooperative establishes a base price in September and pays the growers a harvest advance, usually about 50 percent of the base price, within 5 days of delivery. The cooperative then pays the growers a monthly sum between 0 and 5 percent of the base price from a pool of profits and receipts from the marketing of the crop over the next 24 months. The final payout may ultimately be higher or lower than the base price. Furthermore, some money is held back for capital investment by the cooperative.

Processors typically pack California-style olives in metal tins with either the packer's brand or the distributor's brand labels. The Federal marketing order for olives requires the domestic industry to market California-style whole and pitted olives in seven size categories (small, medium, large, extra large, jumbo, colossal, and super colossal) specified in the U.S. Standards for Grades of Canned Ripe Olives (7 CFR 52.3754). Processors sell the packed olives either through food brokers or directly to retail distributors. Generally, about 60 percent of the output is packed for retail consumers. Shipments to food service users such as restaurants, pizza parlors, or institutional kitchens account for the remaining 40 percent.

Spanish-style olives are packed in glass, most commonly with the distributor's brand label, marked according to the variety of olive, whether whole or pitted, and the type of stuffing in the olive. Greek- and Sicilian-style olives may be packed in glass containers for retail sale, but most commonly are sold in large containers to restaurants, specialty ethnic markets, and supermarket delis.

Vertical and Horizontal Integration

There is substantial vertical integration in the olive industry. About 40 percent of the olives grown in the United States were shipped by the two grower-owned cooperatives, before the closure of the Lindsay Olive plant. Grower-owned cooperatives are vertically integrated from the growing operations through the marketing stages. The independent processors handle olives from the raw material stage to the packed finished labelled product ready for sale to the consumer.

Olives are the primary, if not the only, product handled at domestic processing plants. Some of the factories are the sole operations of the owners while others are part of multinational food companies that offer a wide variety of products. Nonetheless, the olive operations are run as independent divisions, even with multiproduct food companies such as Tri-Valley Growers and Vlasic Foods, a division of Campbell's Soup Co.

Firms that import and repack olives are not vertically integrated. As mentioned earlier, most firms repackage olives as part of their larger pickling operations, thereby attaining some degree of horizontal integration.

Degree of Foreign Integration

Independent processors of California-style olives also import provisionally preserved olives[17] from Mexico, Spain, and Morocco. Imports of

[15] Telephone interview with Edward Culleton, President of the Green Olive Trade Association, Jan. 8, 1992.

[16] Growers wishing to leave the cooperative must notify the cooperative during a specific limited window of time (generally April) and deliver that year's crop in the fall.

[17] Provisionally preserved olives are olives that have been preserved in brine, but that are unsuitable in that state for human consumption.

foreign-grown olives for further processing reached 13,619 metric tons in the 1991/92 crop year[18] and are estimated by commission staff to be over 15,000 metric tons for the 1992/93 crop year.[19] This is equivalent to 23 percent of the California crop in 1991/92 and 10 percent of the 1992/93 crop. These imports of foreign-grown olives for further processing is a dramatic shift from the 1987/88 to 1990/91 period, when this type of import averaged only 5,000 metric tons per year. Importer-repackers of olives receive all of their olives from foreign suppliers. Furthermore, over one-third of the major packing-exporting companies in Spain are either partially or fully owned by U.S. interests. Vlasic, recently purchased one of the largest Spanish packing facilities in Seville from Durkee-French Foods.

U.S. Government Programs

Olives are subject to a Federal marketing order that creates mandatory grade, size, and quality regulations.[20] Federal marketing order 932 (7 CFR 932) for olives grown in California became effective in 1965. The goals of the marketing order are to ensure that growers are treated fairly by setting common industry standards for grades and sizes and to ensure that consumers receive a high-quality product clearly marked by size. The marketing order sets minimum grade and size requirements, but does not regulate production or prices. Size requirements are applied to unprocessed olives to ensure accurate determination of the size assumption of grower lots for making grower payments (incoming requirements). They are also applied to processed olives to ensure that consumers receive a uniformly sized product (outgoing requirements). Authority to change the size requirements is also provided by the marketing order.

The order also regulates marketing of olives smaller than those allowed in the whole and pitted styles. These are defined as "limited-use-size olives," e.g. halved, sliced, and chopped olives. Additionally, the order contains authority for the California Olive Committee[21] to engage in market research and development projects (including paid advertising) and production research. The budget for the marketing order comes from an assessment on growers that has ranged in recent years from 20 to 25 dollars per ton. An olive import regulation under section 8e of the Agricultural Marketing Agreement Act (7 CFR 944) applies to all imported olives marketed as canned whole ripe olives or in limited-use styles. Figure 3 shows utilization of U.S. olive crops under the marketing order standards.

[18] The crop year for the purposes of this report begins Aug. 1 and ends the following July 31, unless otherwise noted.

[19] Estimate of the USITC based on information by the U.S. Department of Commerce and the California Olive Committee.

[20] Grading standards are voluntary unless a marketing order is implemented to make the standards mandatory.

[21] The committee is composed of eight grower representatives, nominated by their fellow growers from four districts in the regulated olive growing region, and eight canner representatives, appointed by the canning companies.

Federal and California water projects provide irrigation services that have benefitted olive production at the farm level. Irrigation water available to olive growers contributes to the high yields and relatively consistent quality of table olives grown in California. In general, the rates paid for water by farmers are much less than comparable urban rates in California. Nonetheless, most of the savings from the farm water prices from the irrigation projects are capitalized into the value of the farm land where olives are grown.

Environmental Considerations

A primary concern for all fruit and vegetable growers is the reregistration of chemicals, fungicides, and pesticides. Amendments passed in 1988 to the Environmental Protection Agency's Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), require that new data on all pesticides[22] be gathered before they are reregistered. The cost of collecting this data is often greater than the profit potential of the product, which has led chemical companies to discontinue many of the products used on fruit and vegetables.[23] The domestic industry contends that if these chemicals are not permitted in the United States, while these same chemicals are licensed and used in foreign countries, the U.S. grower will be at a disadvantage.[24]

Furthermore, the processing sectors of the industry are facing tightening effluent and water usage constraints. To meet water quality guidelines under the Clean Water Act, the industry has had to invest in new filtration and distillation systems for used water. The industry is attempting to solve the water usage problem by replacing water-based flue systems with dry conveyers, where possible, in order to move the olives through the factory.

Consumer Characteristics and Factors Affecting Demand

Olives are consumed throughout the United States. They are purchased both for home use and by establishments in the food service industry, such as restaurants, pizzerias, and cafeterias. Between 1987/88 and 1991/92, California-style olives made up roughly 55 to 65 percent of domestic consumption, with Spanish-style olives accounting for 25 to 30 percent.[25] All other styles of olives accounted for the remaining consumption. Per capita household consumption of California-style black olives is highest in the Rocky Mountain, Pacific, and Northeastern States while consumption in the Southern States is much lower. Similar distribution data are not available for other styles of olives.

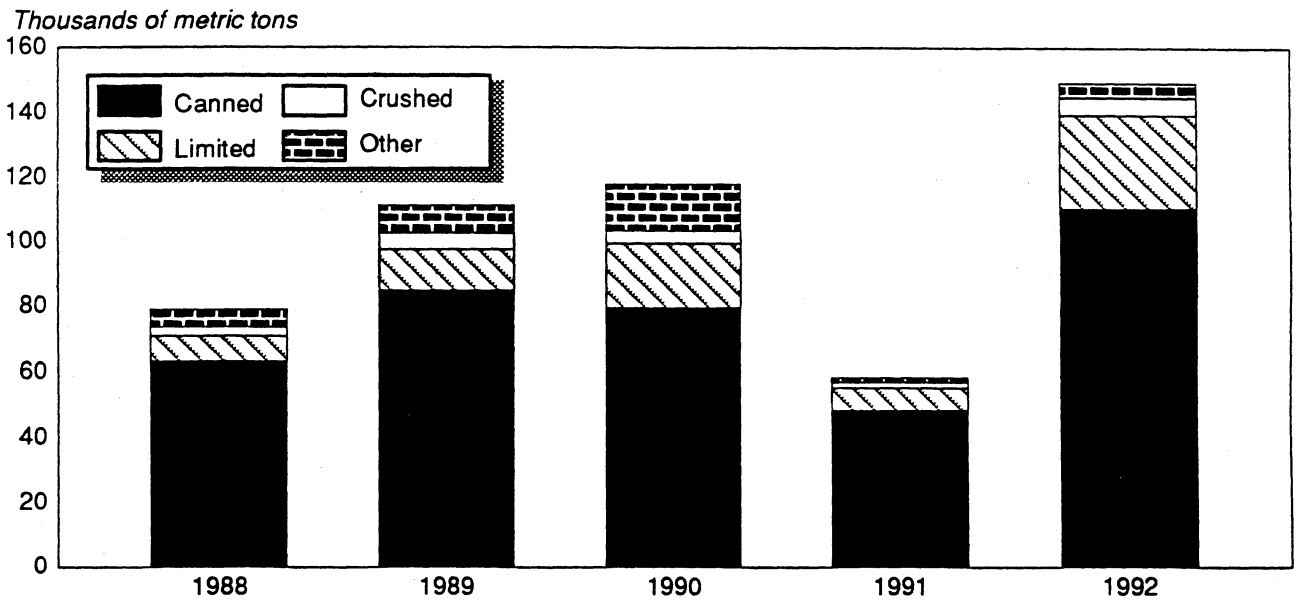
[22] FIFRA defines pesticides to include fungicides, insecticides, rodenticides, and herbicides.

[23] Statement of Richard Holt, Representative of E.I. Dupont de Nemours & Co., in an address to the United Fresh Fruit and Vegetable Association Annual Meeting, Orlando, FL, Feb. 17, 1992.

[24] Telephone interview with David Daniels, president, California Olive Committee, Dec. 5, 1991.

[25] USITC estimate based on information from the U.S. Department of Commerce and the California Olive Council.

Figure 3
Olives: U.S. farm production by type of utilization, 1988–92



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

Retail and wholesale demand for olives is relatively inelastic when compared with that of other kinds of fruits. This may be explained by the low cost of the olive relative to the total costs of the food preparations that olives supplement, such as pizzas, salads, and relish trays. The olive has few, if any, food substitutes. Substitution occurs mainly between the size and form of olive, depending on price differences.

The demand for individual styles of olives, for example, California- and Spanish-style olives, tends to be independent. Consumers who want Spanish-style olives are not likely to substitute Greek, Sicilian, or California-style olives unless there is a substantial price differential.

The food service market for sliced California-style black olives is the most price-sensitive. Imports of black sliced olives from Spain made from the Hojiblanca variety, priced at a discount due to lower quality, have made significant inroads into the pizza market. Nonetheless, many pizza chains continue to purchase domestic and higher quality imported California-style olives at premium prices.

Both of the major styles of olives sold in the United States are marketed in various forms, such as whole with pits; whole with pits removed; and whole with pits removed and centers stuffed, usually with a strip of pimiento pepper. Olives are also sold as halves or quarters and as broken, sliced, or chopped. The California-style olive is seldom packed in glass whereas the Spanish-style olive is predominantly packed and displayed in glass.

Domestic consumption of California-style olives has shifted dramatically in the last 12 years. Whole olives with pits have declined in popularity, while pitted and sliced olive consumption has risen dramatically (figure 4). This shift in consumer preference arises, in part, from the growing importance of the pizza industry, one of the larger users of olives, and the eating convenience of the pitted olive over the whole olive. The smaller sized olives are the most popular at the retail level, attributed by industry sources to the greater number of olives that the consumer can purchase in a standard-size can relative to the fewer larger olives in the same sized can.

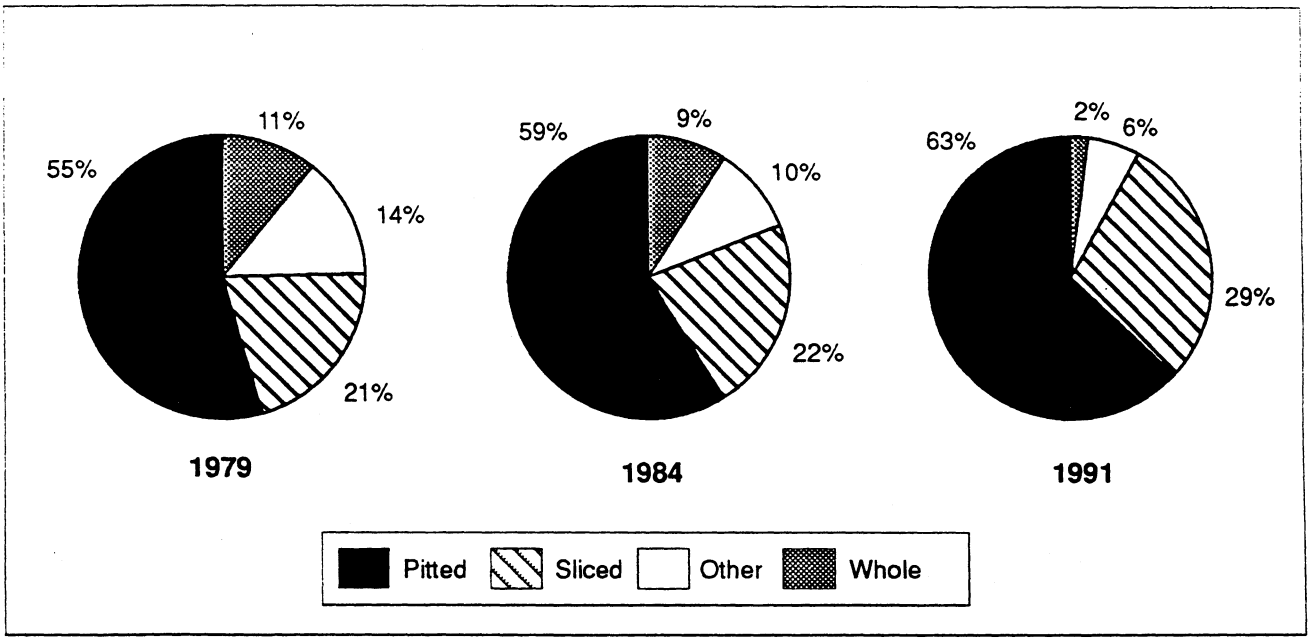
FOREIGN INDUSTRY PROFILE

Preliminary production statistics for the 1992/93 crop year indicate that Spain led world table olive production in that year with 225,000 metric tons (see table 2). The United States was the second-largest producer, though Turkey, would rank second if a 5-year average were considered. The large U.S. crop was due to the strong alternate bearing pattern of U.S. table olive trees in 1992/93. The following table shows world production estimates provided for the last 6 crop years.

Spain

Table olives account for over half of Spain's agricultural exports to the United States and 7 percent of all Spanish exports to the United States. Though olives are grown throughout Spain, commercial table olives are grown mostly in Andalusia in the south and Extremadura in the west. Based on the latest available data from the Spanish Ministry of Agriculture, acreage has shown an upward trend in the past 20 years, from 107,700 hectares in 1969/70 to 190,700 hectares in

Figure 4
Percentage of total sales by type of California–style olive, 1979, 1984, and 1991



Note.—Data for crop years 7/78–6/79, 8/84–7/84, 8/90–7/91.

Source: California Olive Committee.

Table 2
Table olives: World production, 1987/88-1992/93

(1,000 metric tons)

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
Spain	215.9	169.3	279.8	236.8	227.0	225.0
United States	58.5	76.7	106.6	114.8	57.5	144.3
Turkey	95.0	110.0	80.0	150.0	110.0	120.0
Italy	75.0	79.5	122.1	44.5	100.0	90.0
Morocco	70.0	70.0	80.0	80.0	85.0	80.0
Syria	50.0	72.0	35.0	80.0	56.0	72.0
Greece	60.0	85.0	70.0	70.0	80.0	70.0
Argentina	35.0	30.0	32.0	35.0	30.0	33.0
Portugal	20.0	15.0	20.0	18.0	25.0	15.0
Rest of World	104.3	115.3	120.0	120.2	122.5	99.2
Total	783.7	822.8	946.1	949.3	893.0	948.5
EC	372.7	351.1	494.0	370.0	434.7	344.7

Note.—Data for 1991/92 and 1992/93 crop years are estimates as of December 1992.

Source: International Olive Oil Council, National Agricultural Statistics Service, and Spanish Ministry of Agriculture, Fisheries, and Food.

1989/90 (see table 3). Spanish data sources also indicate that in 1989/90, 92 percent of olive hectares were bearing and 12 percent were under irrigation.

Spanish trade sources estimate the 1992/93 table olive crop to be 247,000 metric tons. This production level is 9 percent lower than that in the previous year, but it is over 5 percent larger than the 1987/88 to 1991/92 year average. The size and quality of the two most recent crops given that 1991/92 was an "off year" in the bearing cycle and that drought conditions were prevalent throughout key periods in both the 1991/92 and 1992/93 growing seasons, indicate that it is very likely that half of the table olive acreage is under irrigation instead of the 12 percent indicated by official statistics.[26]

Major new table olive plantings have been declining in the past few years. As Spain is phased into becoming a full member of the EC, Spanish olive oil becomes eligible to receive a larger percentage of the EC support price, which historically is higher than

[26] U.S. Department of Agriculture, Foreign Agriculture Service (FAS), "Agriculture Situation", AGR No. SP2026, Mar. 3, 1992.

Table 3
Table olives: Spanish acreage and production, 1981-92

Years	Acreage	Production
	(hectares)	*(metric tons)*
1981	(1)	131,600
1982	153,300	225,800
1983	155,000	76,300
1984	158,400	286,300
1985	157,600	114,500
1986	163,900	237,800
1987	177,700	215,900
1988	187,200	169,300
1989	190,700	279,800
1990	(1)	236,800
1991	(1)	266,000
1992	(1)	247,000

[1] Data not available.

Source: Spanish Ministry of Agriculture, Fisheries, and Food for 1981 through 1989. International Olive Oil Council for 1990. Trade sources for 1991 and 1992.

the world market price.[27] Thus production of olives for processing into oil is more attractive than production of table olives for many growers. Given that growers received record prices in 1991/92 and 1992/93, it is reasonable to assume that below-average and small olives were crushed into olive oil instead of processed into table olives, reflecting the attractiveness of the oil market.

The leading table olive varieties grown in Spain are Manzanilla, Gordal, and Hojiblanca, which together accounted for 85 to 90 percent of total production. The Manzanilla and Gordal, known as "the Queen" in U.S. industry trade, are grown almost entirely in Andalusia, primarily for export. The Hojiblanca is a mixed use variety that can be used for olive oil production or for processing for table use, mainly as black olives. It is estimated that 35 percent of Spain's 1991/92 table olive crop will be treated and oxidized to produce black ripe olives.[28]

Spain's table olive industry comprises medium to large farms scattered throughout the major producing areas. Table olive groves are frequently in areas where the soil is not suitable for alternative productive uses and that are often far from readily available water sources. Therefore, weather, in particular drought, affects the size and quality of the crop more so than in California, with its access to irrigation.

Like California growers, most Spanish growers follow what are considered good cultivating methods that help maximize harvest. This includes sufficient fertilization, pest control, and pruning in the major production areas. In addition, harvesting is done almost exclusively by hand to avoid bruising the fruit.

About 80 percent of Spain's table-olive-processing plants are in the Province of Seville. The port of Seville provides ideal conditions for easy, relatively inexpensive movement into world markets. Spanish plants have modern, clean, spacious facilities and are on a technological level similar to that of U.S. processors. Currently there is a plentiful labor supply for the processing industry.[29]

In general, the Spanish firms are vertically integrated from the raw-material stage through the export and marketing stages. One of the larger Spanish exporters, Agro Sevilla Aceitunas, is a grower-owned cooperative that handles olives from the growing stages through the marketing stages.

Considerable consolidation occurred in the Spanish olive industry in the late 1970s. Under this consolidation, the number of packer-exporters declined while the average processing plant size increased. This has led to a more orderly marketing environment, which has contributed to a subsequent expansion in export markets. Because prices are set by the large export-processors, it has also had the effect of stabilizing export and domestic prices for olives.[30] The industry consolidation trend appears to have ended, however, as there has been only one recent significant absorption—that by "Compañía Envasadora Loreto, S.A." (CENLO) of the firm "ECF, España, S.A."[31]

Traditionally, the Spanish industry was geared almost entirely towards export markets, with only olives not meeting export standards consumed in Spain. However, in recent years, domestic consumption has increased, reflecting rising per capita incomes and higher standards of living. Domestic consumption is estimated to be 130,000 metric tons compared with 125,000 metric tons shipped as exports.[32]

The United States and Italy are the leading markets for Spanish table olive exports. These exports have remained steady in spite of a relatively strong Spanish peseta relative to the U.S. dollar. Table 4 shows preliminary Spanish Customs Office data for 1992 exports.

Other Countries

Italy

In addition to being one of the leading producers of table olives in the world, growing the large Ascolana variety, Italy is also the leading consumer of table olives in the world at roughly 144,000 metric tons

[27] Support prices for olive oil are to be aligned with those prevailing in the Community of Ten, EC countries excluding Spain and Portugal, by annual stages over a 10-year period ending on Jan. 31, 1995.

[28] U.S. Department of Agriculture, FAS, "Agriculture Situation", AGR No. SP2026, Mar. 3, 1992.

[29] U.S. Department of Agriculture, FAS, Agricultural Attache reports from Spain, 1980–91.

[30] U.S. Department of Agriculture, FAS, Agricultural Attache reports from Spain, 1980–91.

[31] Ms. María Pérez-Ribes, Counselor for Economic and Commercial Affairs, letter to USITC staff, Feb. 12, 1992.

[32] U.S. Department of Agriculture, FAS, "Agriculture Situation", AGR No. SP3092, Apr. 19, 1993.

Table 4
Table olives: Spanish exports, by country of destination, 1992

Country	Metric Tons
United States	53,303
Italy	21,921
Saudi Arabia	7,971
Canada	6,772
France	6.767
Germany	5.080
Australia	3,144
United Kingdom	2,466
Mexico	1,486
Portugal	1,455
Venezuela	1,405
All others	13,088
Total	124,818

Source: Spanish Customs Office (Monthly Reports).

annually.[33] Roughly half of the olives consumed in Italy are green in color and prepared in the Sicilian-style described earlier, with the other half being black olives. There are also a significant number of imports of olives from Spain (25,000 metric tons).

Olive production is mostly in the southern region of Italy, with some production in the central regions. Italian olive acreage in production in 1987 was over 1,150,000 hectares, with nearly 60 percent of the olive trees grown in hilly areas.[34] Over half of all operations are small family operations under 2 hectares, using low levels of commercial inputs.

Given the strong demand for table olives in Italy, it is likely that Italy will continue to be a significant net olive importer and not export significant quantities to the United States.

Turkey

Much like Italy, Turkey is both one of the largest consumers and producers of table olives in the world. The favored style of olive is the black olive in brine. Turkey has 217,000 hectares of table olives and mixed-use varieties that may be used for table olives.[35] However, given the regional preference for the ripened black olive in brine style of olive, any expansion or development of export markets would likely focus on the nearby Mediterranean and Middle Eastern markets instead of the United States.

Greece

Unlike Italy and Turkey, Greece is a highly export-oriented producer of table olives, with 55 to 65 percent of production exported.[36] Currently less than 10 percent of Greek olives are exported to the United States.[37] The United States will likely increase its imports from Greece, given the growing popularity of Greek-style olives. It is unlikely that Greece will compete in the California-style olive market, given that most olives are harvested when black.

Morocco

Morocco is an export-oriented producer exporting roughly 65 percent of its table olive production. In addition, nearly all of Morocco's olive trees, covering 365,000 hectares,[38] are of mixed-use varieties that can be switched between either table or oil use. Currently most production goes into producing a Picholine-style olive which is favored in and exported to France. This olive is picked when green in color, allowing it to be processed as a California-style olive.

Total U.S. imports of California-style olives from Morocco have risen from 1,142 metric tons in 1989/90 to 2,853 metric tons in 1991/92.[39] U.S. imports of sliced California-style olives rose from 523 metric tons in 1989/90 to 1,495 metric tons, valued at nearly $2.7 million, in 1991/92.[40] Thus, Morocco appears capable of competing in commercially significant quantities in the California-style olive market.

U.S. TRADE MEASURES

Tariff Measures

Table 5 shows the column 1 rates of duty as of January 1, 1993, for the articles included in this summary (including both general and special rates of duty), and U.S. exports and imports for 1992. An explanation of tariff and trade agreement terms is shown in appendix A. The aggregate trade-weighted average rate of duty for all products covered in this summary, based on 1992 calendar year imports, including those entered duty-free, was 4.82 percent ad valorem equivalent; the average trade-weighted rate of duty for the dutiable products was 4.84 percent ad valorem equivalent.

The U.S.-Israel Free-Trade Area Implementation Act of 1985 freezes olive tariffs until 1995, because the olive industry was deemed to be highly import sensitive under this act. Thus, only fresh or chilled olives and dried olives enter duty-free. The U.S.-Canadian Free-Trade Agreement also deemed olives to be an import-sensitive industry; thus, tariff reductions under the agreement are phased in over a 10-year period. Olives entering the United States duty free represent only 1 percent of the value and 5 percent of the volume of imports, and these imports enter primarily under the Generalized System of Preference (GSP). GSP status was granted for the first time in

[33] Division of Economic Affairs estimate, International Olive Oil Council, Nov. 1992, Madrid, Spain.
[34] "National Olive Oil Policies," International Olive Oil Council, May 13, 1991, p. 7–1.
[35] Ibid., p. 14–1.
[36] Division of Economic Affairs estimate, International Olive Oil Council, Feb. 1992, Madrid, Spain.
[37] USITC estimate based on information from the U.S Department of Commerce and the International Olive Oil Committee.
[38] "National Olive Oil Policies," p. 8–1.
[39] Compiled from statistics of the U.S. Department of Commerce.
[40] Ibid.

Table 5
Olives: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Brief description	Col. 1 rate of duty As of Jan. 1, 1993 General	Col. 1 rate of duty As of Jan. 1, 1993 Special[1]	U.S. exports, 1992	U.S. imports, 1992
				Thousand dollars	
0709.90.35	Olives, fresh or chilled	11¢/kg	Free (E,IL,J) 5.5¢/kg (CA)	([2])	44
	Olives, provisionally preserved (for example, by sulfur dioxide gas, in brine, in sulfur water or in other preservative solutions), but unsuitable in that state for immediate consumption:				
0711.20.15	Olives, not pitted, under the rate quota specified in additional U.S. note 5 to chapter 7 of the Harmonized Tariff Schedule of the United States (HTS)[3]	3.7¢/kg on drained weight	Free (A,E,J) 1.8¢/kg on drained weight (CA)	539[4]	53
0711.20.25	Olives, not pitted, in excess of the rate quota specified in note 5 to chapter 7 of the HTS	7.4¢/kg on drained weight	Free (E,J) 3.7¢/kg on drained weight (CA)		10,484
0711.20.40	Olives, pitted or stuffed	10.8¢/kg on drained weight	Free (E,J) 5.4¢/kg on drained weight (CA)		140
	Dried olives, whole, cut, sliced, broken or in powder, but not further prepared:				
0712.90.15	Not ripe	5.5¢/kg	Free (A,E,IL,J) 2.7¢/kg (CA)	([5])	160
0712.90.20	Ripe	5.5¢/kg	Free (E,IL,J) 2.7¢/kg (CA)	984	
	Olives prepared or preserved otherwise than by vinegar or acetic acid, not frozen:				
2005.70.11	Olives, green in color, not pitted, in a saline solution, in containers each holding less than 13 kg, drained weight, in an aggregate quantity not to exceed 730 metric tons entered in any calendar year	5.4¢/kg on drained weight	Free (A,E,J) 2.7¢/kg on drained weight (CA)	5,588[6]	61
2005.70.13	Other olives, green in color, not pitted, in a saline solution, under the rate quota specified in additional U.S. note 5 to chapter 20 of the HTS[3]	3.7¢/kg on drained weight	Free (A,E,J) 1.8¢/kg on drained weight (CA)		1,411

See footnotes at end of table.

Table 5—Continued
Olives: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Brief description	Col. 1 rate of duty As of Jan. 1, 1993 General	Special[1]	U.S. exports, 1992	U.S. imports, 1992
				Thousand dollars	
2005.70.15	Other olives, green in color, not pitted, in a saline solution in excess of the rate quota specified in additional U.S. note 5 to chapter 20 of the HTS	7.4¢/kg on drained weight	Free (A,E,J) 3.7¢/kg on drained weight (CA)		3,776
2005.70.21	Olives, stuffed, place packed, in containers each holding not more than 1 kg, drained weight, in an aggregate quantity not to exceed 2,700 metric tons in any calendar year	5.4¢/kg on drained weight	Free (A,E,J) 2.7¢/kg on drained weight (CA)		5,467
2005.70.22	Other olives, stuffed, place packed	10.8¢/kg on drained weight	Free (A,E,J) 5.4¢/kg on drained weight (CA)		918
2005.70.25	Other pitted or stuffed olives, not place packed	10.8¢/kg on drained weight	Free (A,E,J) 5.4¢/kg on drained weight (CA)		104,100
2005.70.50	Olives, not green in color, not pitted, in a saline solution, canned	11.6¢/kg on drained weight	Free (E,J) 5.8¢/kg on drained weight (CA)		835
2005.70.60	Other olives, not green in color, pitted, in a saline solution, canned	11.9¢/kg on drained weight	Free (E,J) 5.9¢/kg on drained weight (CA)		30,326
2005.70.70	Olives, not green in color, in a saline solution, in airtight containers of glass or metal	11.6¢/kg on drained weight	Free (E,J) 5.8¢/kg on drained weight (CA)		292
2005.70.75	Olives, not green in color, in a saline solution, not canned, not in airtight containers of glass or metal	5¢/kg on drained weight	Free (A,E,J) 2.5¢/kg on drained weight (CA)		12,482
2005.70.81	Olives, otherwise prepared or preserved, green, in containers each holding less than 13 kg, drained weight, in an aggregate quantity not to exceed 550 metric tons in any calendar year	5.5¢/kg on drained weight	Free (E,J) 2.7¢/kg on drained weight (CA)		632

See footnotes at end of table.

Table 5—Continued
Olives: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan 1, 1993; U.S. exports, 1992; and U.S. imports, 1992

HTS subheading	Brief description	Col. 1 rate of duty As of Jan. 1, 1993		U.S. exports, 1992	U.S. imports, 1992
		General	Special[1]		
				Thousand dollars	
2005.70.83	Other olives, otherwise prepared or preserved	11¢/kg on drained weight	Free (E,J) 5.5¢/kg on drained weight (CA)		4,039

[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] Not separately provided for; included in subheading 0709.90.50000.

[3] The rates of duty set forth in subheadings 0711.20.15 and 2005.70.13 apply to the first 4,400 metric tons of olives, green in color, not pitted, in a saline solution, in containers each holding more than 8 kg, drained weight, certified by the importer to be used for repacking or sale as green olives, the foregoing entered under both subheadings combined in any calendar year.

[4] Separate export data on an 8-digit level are not available; also included are 0711.20.25 and 0711.20.40.

[5] Not separately provided for; included in subheading 0712.90.9000.

[6] Separate export data on an 8-digit level are not available; also included are 2005.70.13, 2005.70.15, 2005.70.21, 2005.70.22, 2005.70.25, 2005.70.50, 2005.70.60, 2005.70.70, 2005.70.75, 2005.70.81, and 2005.70.83.

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

1992 for the olive categories that correspond to Spanish-style and Greek-style olives.[41]

U.S.-EC Agreement on Citrus and Pasta

The United States established tariff rate quotas covering imports of four classes of olives[42] as part of the settlement of a long-standing dispute with the EC involving market access to the EC for U.S. citrus products and EC export subsidies for pasta products. The United States and the EC signed an agreement, known as the citrus/pasta agreement, on February 24, 1987, resolving this dispute; legislation implementing the new rates was passed in August 1988[43] and the new rates became effective January 1, 1989.[44] The United States reduced tariffs 50 percent for these four classes of olives for imports under the quota levels.

The tariff rate quotas were effected under the Harmonized Tariff Schedule (HTS), which superseded the Tariff Schedules of the United States (TSUS) on January 1, 1989. The provisions for olives in the HTS are substantially revised from those in place under the TSUS. The revisions were begun in December 1986, at the request of the domestic olive industry, as an attempt to reorganize and simplify the tariff schedule for olives. Important changes in the revised HTS schedule provide for green olives (the leading type supplied by Spain) to be distinguished from black olives (the leading type produced in the United States) and for duty rates on a weight basis rather than a volume basis. The new structure was to be equivalent to the former structure in total collectable duties on olives. Because the EC is the principal trading partner affected, it was considered desirable to have the EC sign off acceptance of the new tariff structure and duty rates. This acceptance was part of the citrus/pasta agreement.

Nontariff Measures

Processed olives are among the low-acid foods for which the U.S. Food and Drug Administration (FDA) has established special food-processing requirements as a consumer safeguard against botulism and other contaminants. Thermally processed foods, including olives, must follow FDA "good manufacturing practices" (21 CFR 113) requiring processors to register their plants, file their canning processes, and maintain records on processing and can closure inspections of each lot canned. The FDA requirements apply to imported foods as well.

Additionally, processed olives are among the foods in which pits and pit fragments may be found. Olives are the subject of an FDA notice to dealers, importers, and shippers of pitted or pitted and stuffed olives to the effect that excessive pits and pit fragments in those olives may be considered in violation of the Food and Drug Act.

As mentioned earlier, importers wishing to sell their olives as California-style black olives must meet the minimum grade and size requirements set out in Federal marketing order 932. None of these regulations mentioned above are considered to be significant barriers to trade.

FOREIGN TRADE MEASURES

Tariff Measures

Canadian imports of olives from the United States that do not need to be repacked or processed further enter at a 6.2 percent ad valorem duty rate that will be phased out by 1998. Other olives that will be repacked or processed in Canada enter duty-free. Mexico has a 20-percent duty rate on processed olives, which is scheduled to be phased out over 5 years beginning in 1994 pending approval of the North American Free Trade Agreement. Japan has a 7.2-percent ad valorem duty on olives in airtight containers of not more than 10 kilograms including the container and 9.6-percent ad valorem duty for all other processed olives. The European Community has a 20-percent ad valorem duty rate on processed olives from the United States.

Nontariff Measures

Certain Japanese phytosanitary restrictions have limited and discouraged attempts to market California-style olives from the United States. The industry is working to obtain acceptance by Japan of U.S. olives containing the food additive sodium benzoate, used in the early processing stages and mostly washed out by the canning stage, in amounts sanctioned by the FDA. Some domestic processors are working to ensure that their olives are free of sodium benzoate in the final canned product.

U.S. MARKET

Consumption and Import Penetration

The United States is one of the world's largest markets for table olives. Apparent U.S. consumption of table olives increased 11.2 percent, an annualized rate of 2.1 percent, from 138 thousand metric tons in 1987/88 to 154 thousand metric tons in 1991/92 (table 6).

In addition to improved marketing by the olive industry, consumption is most likely rising as a result of two major shifts in the consumer marketplace. First the pizza industry has expanded as part of the trend o

[41] Presidential Proclamation 6447 of June 15, 1992, Federal Register Vol.57, No. 117, pp. 26981–26988, affecting imports after July 1, 1992.

[42] These classes include HTS numbers 0711.20.15, 2005.70.11, 2005.70.13, 2005.70.21, and 2005.70.81.

[43] See Sec. 1122 of the Omnibus Trade and Competitiveness Act of 1988, Public Law 100–418, approved Aug. 23, 1988, 102 Stat. 1143.

[44] Proclamation 5924 of Dec. 21, 1988, in Federal Register, Vol. 53., No. 247, Friday Dec. 23, 1988.

Table 6
Olives: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, crop years 1987/88 to 1991/92

Year	Producers' shipments[1]	Exports	Imports	Apparent consumption	Ratio of imports to consumption
			Metric Tons		*Percent*
1987/88	60,500	2,032	79,804	138,272	58
1988/89	67,600	2,299	68,896	134,197	51
1989/90	76,400	2,392	69,368	143,376	48
1990/91	82,300	2,166	65,634	145,768	45
1991/92	81,000	3,157	75,894	153,737	49

[1] Shipments of domestically grown olives as estimated by the staff of the U.S. International Trade Commission.
Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

eating more meals outside the home. Rising pizza sales have led to an increase in demand for sliced olives, which are used as a topping. Second, there has also been an increasing emphasis on eating healthier foods, including salads and vegetables. As a result, olives, a component of salads and other antipasto-vegetable style appetizers, are consumed more frequently. It is likely that olive consumption will continue to increase if these behavioral trends continue.

Imports as a percentage of domestic consumption have steadily fallen from 58 percent in 1987/88 to 49 percent for 1991/92. The fall in U.S. consumption of Spanish-style olives along with increasing domestic shipments of California-style black olives since the small crop in 1987/88 are the foremost reasons for the decline in the import to consumption ratio.

The fall in consumption in Spanish-style olives noted previously has led to a decline in imports from Spain (table 7). Spain has increasingly moved into the California-style olive market, but not at rates to totally offset the decline in total shipments to the United States. Some of the California processors of California-style olives are expanding imports to cover shortfalls in the domestic crop, begin the processing season earlier, and to meet expanding demand. Mexico has become the leading supplier of foreign olives for further processing. Even though the quantity of imports from Greece has been relatively steady, Greece has started shipping a larger percentage of higher value specialty olives to the United States. This shift in import mix has resulted in an increase in the value of U.S. imports from Greece from $5.8 million in 1988/89 to $12.3 million in 1991/92. Morocco has also increased shipments to the United States with California-style canned sliced olives accounting for one-third of the volume.

Much of the volatility in U.S. olive import levels is in the California-style canned black olive market. During the low-production domestic crop year of 1987, imports of canned California-style black olives rose from 13 percent to 26 percent of U.S. consumption.[45]

Since the increases in the domestic crop in that commodity occurred during the period 1988 through 1990, canned black olives imports have fallen to a 14-percent level in 1991 in this sector of the table olive market. However, to make up for the smaller domestic crop in 1991, olives preserved in brine, mainly from Mexico, have been imported for further processing in the United States; such imports were equivalent to about 9 percent of total shipments of California-style olives.

Competition between domestic production and imports has been most intense in sales of the California-style sliced olive packed for food service users. The chief users of this product are pizza makers. During the reduced crop year in 1987, imports supplied nearly 45 percent of this market. The U.S. canning industry has slowly regained a 75-percent share of this market through an intense marketing effort.[46] The domestic industry is highlighting quality differences, comparing the California product to the imported product at trade shows as part of an ongoing marketing effort.

Production

Domestic production of California-style olives at the processing level depends primarily on the quantity and quality of the current olive crop. Because olives are harvested only at one time during the year, inventories of the final canned products are held for distribution throughout the year. In addition, canners may also place olives in brine to preserve olives to be processed later in the year or held until the next year. To help balance fluctuations in supply at the growing level, independent processors have begun to import increasing amounts of preserved olives for final processing in the United States.

The combination of inventories on hand at the end of the year with storage is known as the carry-out. The carry-out grew in the United States in response to the large domestic crops of 1989/90 and 1990/91. The carry-out following the 1991/92 crop year declined sharply as a result of the small domestic crop (table 8).

[45] USITC estimate based on information from U.S. Department of Commerce and the California Olive Committee.

[46] Estimate of the USITC based on official statistics of the U.S. Department of Commerce and the California Olive Committee.

Table 7
Olives: U.S. imports for consumption, by principal sources, crop years 1987/88 to 1991/92

Partner	1987/88	1988/89	1989/90	1990/91	1991/92
			Quantity (1,000 kilograms)		
Spain	(1)	60,207	58,283	51,234	53,891
Mexico	(1)	1,562	1,934	5,067	9,328
Greece	(1)	4,140	4,352	4,700	4,909
Morocco	(1)	1,056	2,640	2,817	4,852
Portugal	(1)	355	373	525	1,141
Turkey	(1)	214	58	165	483
Israel	(1)	383	474	347	382
Italy	(1)	334	294	228	312
France	(1)	185	288	137	193
All other	(1)	460	672	414	403
Total	79,804	68,896	69,368	65,634	75,894
			Value (1,000 dollars)		
Spain	(1)	123,791	126,623	117,671	122,976
Mexico	(1)	1,183	813	1,499	3,880
Greece	(1)	5,835	6,580	9,709	12,314
Morocco	(1)	1,435	3,873	4,259	7,424
Portugal	(1)	566	663	987	2,140
Turkey	(1)	190	114	202	641
Israel	(1)	817	1,003	715	932
Italy	(1)	924	816	734	977
France	(1)	510	640	523	590
All other	(1)	794	813	733	809
Total	129,982	136,045	141,938	137,032	152,683
			Unit value (dollars per kilogram)		
Spain	(1)	2.06	2.17	2.30	2.28
Mexico	(1)	0.76	0.42	0.30	0.42
Greece	(1)	1.41	1.51	2.07	2.51
Morocco	(1)	1.36	1.47	1.51	1.53
Portugal	(1)	1.60	1.78	1.88	1.88
Turkey	(1)	0.89	1.96	1.23	1.33
Israel	(1)	2.14	2.11	2.06	2.44
Italy	(1)	2.76	2.77	3.22	3.13
France	(1)	2.75	2.23	3.81	3.06
All other	(1)	1.73	1.21	1.77	2.01
Total	1.63	1.97	2.05	2.09	2.01

[1] Country-level detail is provided only for years in which there are actual trade data under the *Harmonized Tariff Schedule of the United States* (HTS) and the new Schedule B (based on HTS).
Note.—Because of rounding, figures may not add to the totals shown.
Source:Compiled from official statistics of the U.S. Department of Commerce.

Table 8
Olives: U.S. carry-in, pack, available supply, producer shipments, and carry-out, crop years 1987/88 to 1991/92

Metric tons

Crop Year	Carry in	Pack	Available supply	Shipments	Additions to storage/ inventory	Carry out
1987/88	45,400	51,500	96,900	60,500	100	36,500
1988/89	36,500	62,600	99,100	67,600	3,500	35,000
1989/90	35,000	79,600	114,600	76,400	10,900	49,100
1990/91	49,100	87,600	136,700	82,300	8,400	62,800
1991/92	62,800	57,300	120,100	81,000	100	39,200

Source: USITC estimates based on information from the U.S. Department of Agriculture, National Agricultural Statistics Service, California Olive Committee, and International Olive Oil Council.

FOREIGN MARKETS

Foreign Market Profile[47]

Almost one-third of table olives processed worldwide enter into international trade. This number drops to less than one-fourth if intra-EC trade is excluded. U.S. imports account for about 40 percent of world trade (excluding intra-EC trade), while U.S. exports make up 1.5 percent of trade (September-August marketing year). World consumption was estimated at 907,000 metric tons, during the 1991/92 marketing year. Three areas accounted for over two-thirds of total consumption. First, the EC was the major world market consuming 344,500 metric tons (38 percent). Italy (42 percent of EC consumption) led EC consumption followed by Spain (30 percent), France (10 percent), Greece (6 percent), Portugal (6 percent), Germany (5 percent), and the rest of the EC (1 percent). The United States was the second-largest market with 16 percent of world consumption in 1991/92. Turkey was the third-largest consumer of olives at 11 percent. Figure 5 shows the apparent consumption of table olives of all types in selected areas throughout the world.

[47] Information in this section is based upon USITC estimates derived from information from the U.S. Department of Agriculture, the U.S. Department of Commerce, the California Olive committee, and the International Olive Oil Council.

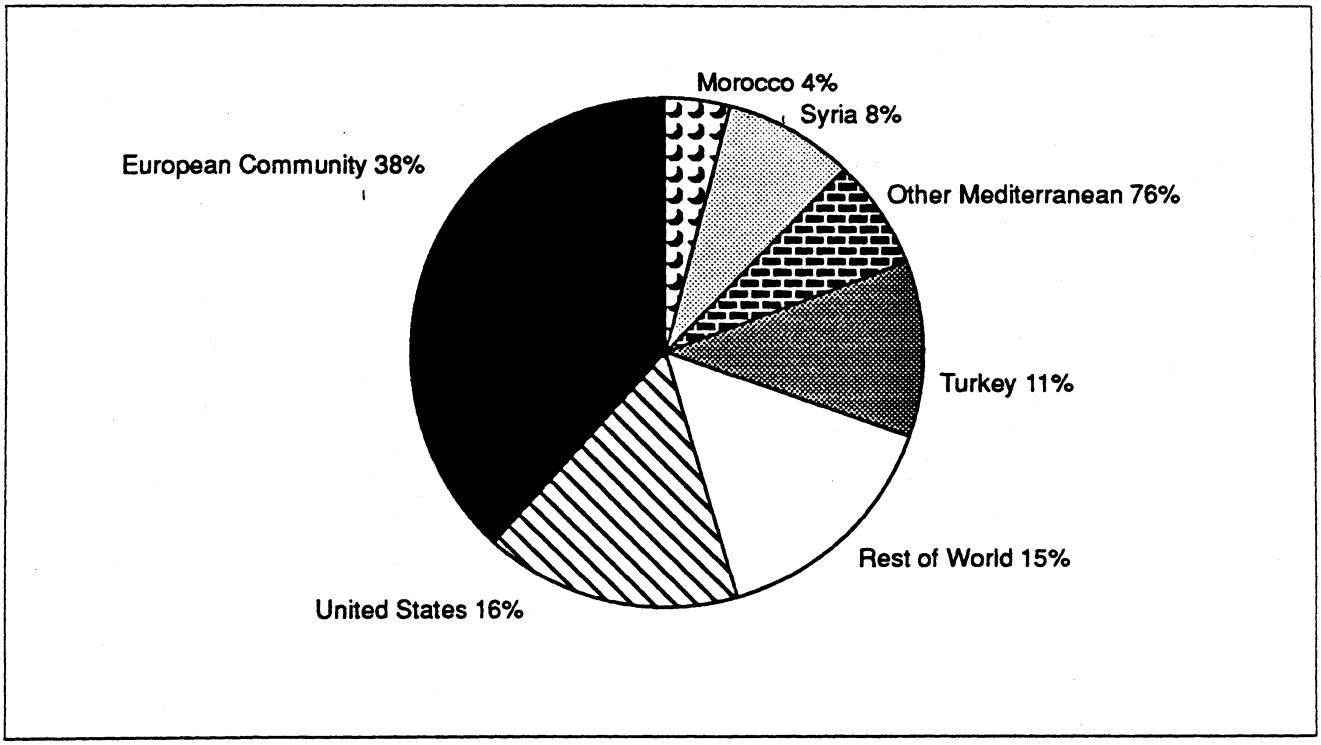
Four countries, Spain, Greece, Morocco, and Argentina, accounted for 88 percent of exports during the 1991/92 crop year (figure 6). Nearly half of world trade is imported into the EC, particularly Italy and France. As noted earlier, the United States is the other significant importer of table olives, with most coming from Spain.

U.S. Exports

Exports are broken out in the Export Schedule B as olives, provisionally prepared, inedible; and olives prepared or preserved except by vinegar or acetic acid and not frozen. Therefore, there are no official data for exports by style of olive. Exports in 1991/92 were equivalent to about 3 percent of domestic shipments. Exports have grown 55 percent in quantity, from 2,032 metric tons in 1987/88 to 3,157 metric tons in 1991/92 (table 9). The value of these exports increased 42 percent, from $3.8 million in 1987/88 to $5.4 million in 1991/92.

Provisionally preserved olives, which accounted for 12 percent of the quantity and 10 percent of the value U.S. olive exports in 1991/92, are shipped primarily to Canada for further processing by the Canadian industry. Exports of the other major category, prepared and preserved olives, have been steadily increased, from 1,744 metric tons in 1987/88 to 2,793 metric tons in 1991/92. California-style olives

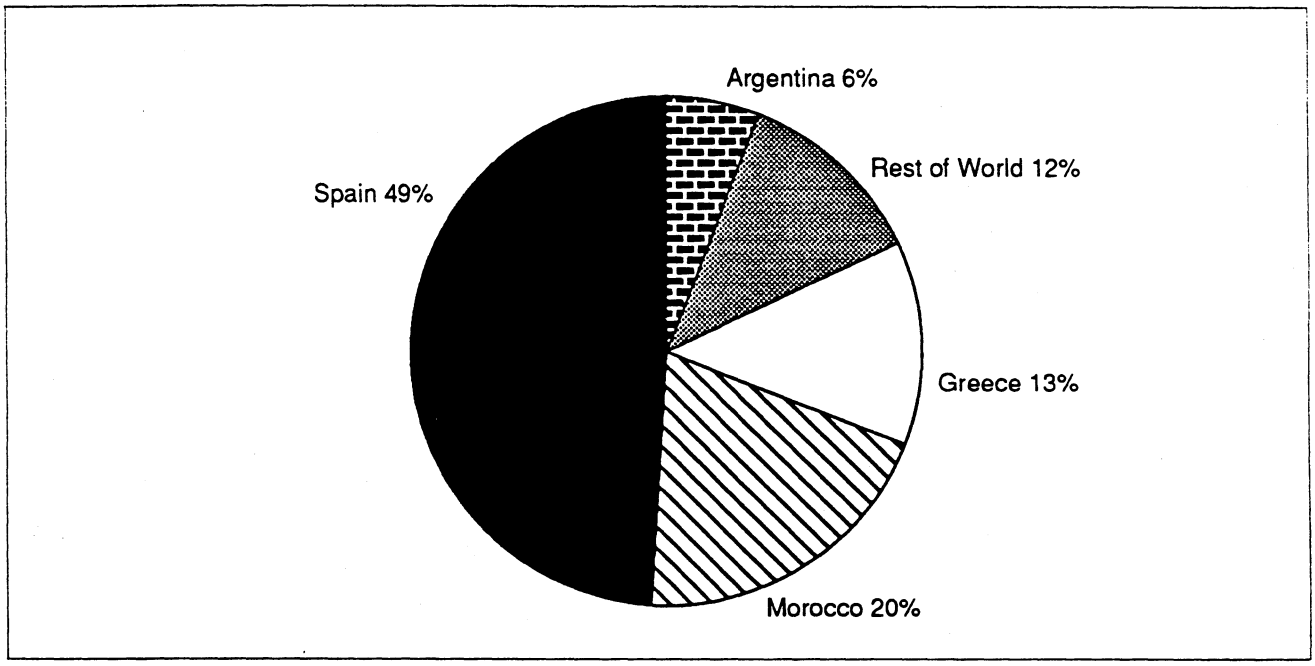
Figure 5
Table olives: World consumption for 1991/92 crop year



Note.—Other Mediterranean Countries include Algeria, Cyprus, Israel, Libya, Jordan, Lebanon, Egypt, Tunsia, and Yugoslavia.

Source: International Olive Oil Council.

Figure 6
Table olives: World exports for 1991/92 crop year



Source: International Olive Oil Council.

are the principal type of exports in the latter category. In addition to Canada, which accounted for over one-third of the volume of exports in 1991/92, Mexico has emerged as a major market in 1991/92. Japan is also becoming an increasingly important market for California-style olives. Exporters that have taken the time to meet Japanese phytosanitary restrictions and develop marketing channels have seen their exports to Japan increase slightly from 563 metric tons, valued at $1.0 million in 1987/88, to 629 metric tons, valued at $1.2 million, in 1991/92. Although shipments are still small, export markets are steadily being developed in Sweden, Singapore, and Hong Kong. As a result of military purchases, exports to Saudi Arabia totaled over 109 metric tons in 1991/92, even though this is not traditionally a large export market.

An important factor limiting future export sales is the lack of marketing and promotional activities to develop new markets. There is no industrywide organization actively promoting olives for export, thereby putting the burden on individual companies, some of which have only limited overseas marketing resources and experience.

U.S. TRADE BALANCE

The United States continued its long-time trade deficit in olives during the 1987/88 to 1991/92 period (table 10). Though exports have been increasing, they have not kept pace with rising imports. The largest deficit occurred in 1991/92, particularly the result of rising imports from Greece, Morocco, and Mexico.

Table 9
Olives: U.S. exports of domestic merchandise, by principal markets, crop years 1987/88 to 1991/92

Country	1987/88	1988/89	1989/90	1990/91	1991/92
			Quantity (1,000 kilograms)		
Canada	(1)	826	1,092	1,227	1,370
Mexico	(1)	141	42	25	718
Japan	(1)	706	852	551	629
Saudi Arabia	(1)	3	3	0	109
Singapore	(1)	64	61	70	89
Sweden	(1)	32	14	26	51
Honduras	(1)	0	0	3	48
Hong Kong	(1)	31	39	40	28
Spain	(1)	35	78	87	19
All other	(1)	461	211	137	96
Total	2,032	2,299	2,392	2,166	3,157
			Value (1,000 dollars)		
Canada	(1)	1,235	1,667	2,416	2,598
Mexico	(1)	200	45	28	844
Japan	(1)	1,214	1,234	1,050	1,156
Saudi Arabia	(1)	14	17	0	45
Singapore	(1)	155	147	175	253
Sweden	(1)	91	65	75	158
Honduras	(1)	0	4	0	55
Hong Kong	(1)	69	67	82	71
Spain	(1)	50	99	123	36
All other	(1)	1,033	393	278	150
Total	3,798	3,968	3,740	4,155	5,459
			Unit value (dollars per kilogram)		
Canada	(1)	1.50	1.53	1.89	1.90
Mexico	(1)	1.42	1.08	1.14	1.17
Japan	(1)	1.72	1.45	1.90	1.84
Saudi Arabia	(1)	4.48	5.66	0.00	0.42
Singapore	(1)	2.42	2.41	2.49	2.85
Sweden	(1)	2.85	4.58	2.87	3.12
Honduras	(1)	0.00	1.32	0.00	1.15
Hong Kong	(1)	2.22	1.71	2.06	2.53
Spain	(1)	1.44	1.27	1.42	1.92
All other	(1)	2.24	1.86	2.03	1.56
Average	1.87	1.73	1.56	1.92	1.73

[1] Country-level detail is provided only for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).

Note.—Because of rounding, figures may not add to the totals shown.

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

Table 10
Olives: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries, crop years 1987/88 to 1991/92[1]
(Million dollars)

Item	1987/88	1988/89	1989/90	1990/91	1991/92
U.S. exports of domestic merchandise:					
Canada	(2)	1	2	2	3
Japan	(2)	1	1	1	1
Spain	(2)	(3)	(3)	(3)	(3)
Greece	(2)	0	0	0	(3)
Morocco	(2)	0	0	0	0
Mexico	(2)	(3)	(3)	(3)	1
Portugal	(2)	0	0	0	0
Israel	(2)	0	0	0	0
Italy	(2)	0	0	0	0
All other	(2)	1	(3)	(3)	(3)
Total	4	4	4	4	5
U.S. imports for consumption:					
Canada	(2)	(3)	(3)	(3)	(3)
Japan	(2)	(3)	(3)	0	(3)
Spain	(2)	124	127	118	123
Greece	(2)	6	7	10	12
Morocco	(2)	1	4	4	7
Mexico	(2)	1	1	1	4
Portugal	(2)	1	1	1	2
Israel	(2)	1	1	1	1
Italy	(2)	1	1	1	1
All other	(2)	1	(3)	1	3
Total	130	136	142	137	153
U.S. merchandise trade balance:					
Canada	(2)	1	2	2	3
Japan	(2)	1	1	1	1
Spain	(2)	-124	-127	-118	-123
Greece	(2)	-6	-7	-10	-12
Morocco	(2)	-1	-4	-4	-7
Mexico	(2)	-1	-1	-1	-3
Portugal	(2)	-1	-1	-1	-2
Israel	(2)	-1	-1	-1	-1
Italy	(2)	-1	-1	-1	-1
All other	(2)	-1	1	(3)	-3
Total	-126	-132	-138	-133	-148

[1] Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.
[2] Country-level detail is provided only for years in which there are actual trade data under the HTS and the new Schedule B (based on HTS).
[3] Less than $500,000.

Note.—Because of rounding, figures may not add to the totals shown.

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

APPENDIX A
EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS

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, Czechoslovakia, Estonia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Poland, Russia, 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 Prod***

ucts 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 108 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 more than 30 supplying countries, including the four largest suppliers: China, Hong Kong, the Republic of Korea, and Taiwan.