Agricultural Issues Center
University of California

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Commodity Profile: Asparagus

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Overview

Asparagus has been grown in the United States since colonial times but commercial production did not begin until the mid 1800s. Asparagus is a high-value, labor-intensive perennial vegetable crop. Essentially all of the U.S. commercial production occurs in California, Michigan and Washington and it is harvested primarily in the January to June period. Complemented by off-season imports mainly from Mexico and Peru, fresh asparagus may be found year round in local markets.

Marketing

About 74 percent of the asparagus produced in the United States was intended for fresh-market uses in 2004 (ERS 2005b). The remainder of the crop was frozen or canned. Most U.S. fresh market asparagus production is of the dark green form, with only minimal production of white (blanched) or light green asparagus, which are produced in the absence of sunlight. In addition to blanching, value-added for asparagus includes the processing of asparagus for pickling which can bring growers a price premium and can be sold in winter months when prices are higher given lower supply (Ohio State University).

Several marketing options are available to small-scale asparagus producers including direct marketing to local consumers and restaurants (with or without preharvest contracts), and at roadside stands and local farmer's markets. While "You-Pick" marketing is not prevalent among asparagus farms, this method can bring growers the highest prices and avoid additional costs that often incur when selling to wholesale markets. Wholesale markets typically have stricter standards in terms of trimming, grading, packing, cooling and handling, which may add cost for growers, and wholesalers are able to dictate prices (Ohio State University). However with pick-your-own, crop damage and losses can be significant, and supervision in the field is required.

Asparagus has been marketed as a good source of folic acid, vitamin C, thiamin, vitamin B6, potassium and many micronutrients. In addition, it contains glutathione, thought to protect against cancer and rutin, which strengthens blood vessels (California Asparagus Commission).

Demand

Per capita demand for asparagus has varied over the years. Total consumption decreased significantly between 1973 and 1979 largely as a consequence of decreased consumption of asparagus used for canning (Figure 1). Increases were seen between 1982 and 1986 and again from 1998 to 2003 in which total consumption increased from 1.0 pound to 1.4 pounds. Consumption of fresh asparagus has continued to increase since 1980, while consumption of canned and frozen asparagus have both followed a decreasing trend.

Exports

Although the United States is a net importer of asparagus, in 2004 U.S. asparagus exports totaled slightly over $38 million. The majority of exports were of fresh asparagus, with just 5 percent of exports frozen or preserved asparagus shipments. The leading export markets for U.S. fresh/chilled asparagus were Canada, accounting for nearly half of U.S. shipments, and Japan, accounting for nearly one-fourth of total fresh exports (Figure 2). The total value of fresh exports peaked in 1994 at $72 million, but has decreased steadily since that time. Canada and Japan have been the two primary markets for U.S. fresh asparagus exports since at least 1989, although exports to Japan have decreased rapidly in recent years, falling below exports to Canada in 2002.

Globally, the largest exporter of asparagus is Peru, which accounted for 22 percent of the world value of exports in 2003 (Foreign Agricultural Service (FAS) 2004). Mexico was responsible for 16 percent of the global export market, followed by the United States and Spain, each with about 14 percent. Peru and other countries benefiting from improved production technology, cheap labor, and favorable climate that allows production during the U.S. off season have begun to increased production. This has led to increased competition for global market share of exports and a decrease of the U.S. market share of world asparagus exports (FAS 2004).

Supply

The world's largest producer of asparagus is China, which accounted for 88 percent of world production in 2004. The second largest producer was Peru accounting for 3 percent of world production followed by the United States with 1.6 percent (Food and Agricultural Organization of the United Nations (FAO)).

According to statistics from the USDA's National Agricultural Statistical Service (NASS), California accounted for 46 percent of the 52,000 total U.S. acres of asparagus harvested in 2004, while Michigan and Washington each accounted for roughly 27 percent of harvested acreage. According to data from the 2002 Census of Agriculture, California production is more concentrated than that of Michigan or Washington, in that it harvests the greatest total acreage of the three on the fewest number of farms. Generally, Washington has provided the highest yields per acre followed by California and Michigan.

U.S. asparagus acreage has been decreasing steadily over the last two decades, from a high of 101,000 acres in 1988 to about 50,000 in 2004 (Figure 3). However, total value of fresh asparagus production has increased, nearly doubling between 1996 and 1999, from just over $100 million to $190 million (Figure 4). In the following years production value dropped and in 2004, fresh asparagus production was valued at $150 million. Yields have remained relatively stable over this period of time (NASSa).

Prices

The inflation-adjusted price for U.S. asparagus (in year-2000 dollars) has been variable over time, with an increasing amount of variability since 1996 especially for fresh asparagus prices (Figure 5). Significant declines in price were notable in 1996 and again in 2002. In 2004, the farm price (adjusted) for fresh asparagus was $121 per cwt. Historically, the price for asparagus for freezing is less than that for the fresh market. Most of the asparagus from California was utilized for the fresh market, while Washington and Michigan utilized more than 62 percent of their combined production in 2004 for processing, making California average prices higher than those from Washington or Michigan.

Imports

Despite the large U.S. market share of world exports, the United States is the leading global importer of asparagus (FAO). In 2003, the United States accounted for 32 percent of world imports, followed by Germany accounting for 14.5 percent and Japan with 12 percent (FAO). The value of U.S. imports has increased nearly 9-fold over the last decade and a half, from $22 million in 1989 to $193 million in 2004 (Figure 6). Accordingly, the percentage of U.S. domestic consumption supplied by imports also has increased since, from 12 percent of consumption supplied by imports in 1979 to 70 percent in 2004 (Figure 7). In 2003 Peruvian imports into the United States overtook imports from Mexico for the first time. By 2004, Peru accounted for 58 percent of total U.S. asparagus imports while Mexico accounted for 38 percent (Figure 6).

Some of the reduction in United States production and market share has been due to increased exports from Peru as a result of the 1991 Andean Trade Preference Act (ATPA) between the United States and Peru (US General Accounting Office). The ATPA was aimed at reducing Peruvian coca production (a precursor to cocaine production) as part of U.S. anti-drug efforts. To accomplish this objective, the ATPA incentivized Peruvian production of asparagus as an alternative crop to coca by allowing asparagus to enter the United States duty-free and by aiding farmers financially in the development of the asparagus industry. By 2003, asparagus overtook coffee as the leading agricultural export from Peru and 75 percent of Peru's fresh market asparagus exports were imported by the United States in 2003 (FAS 2004).

Sources

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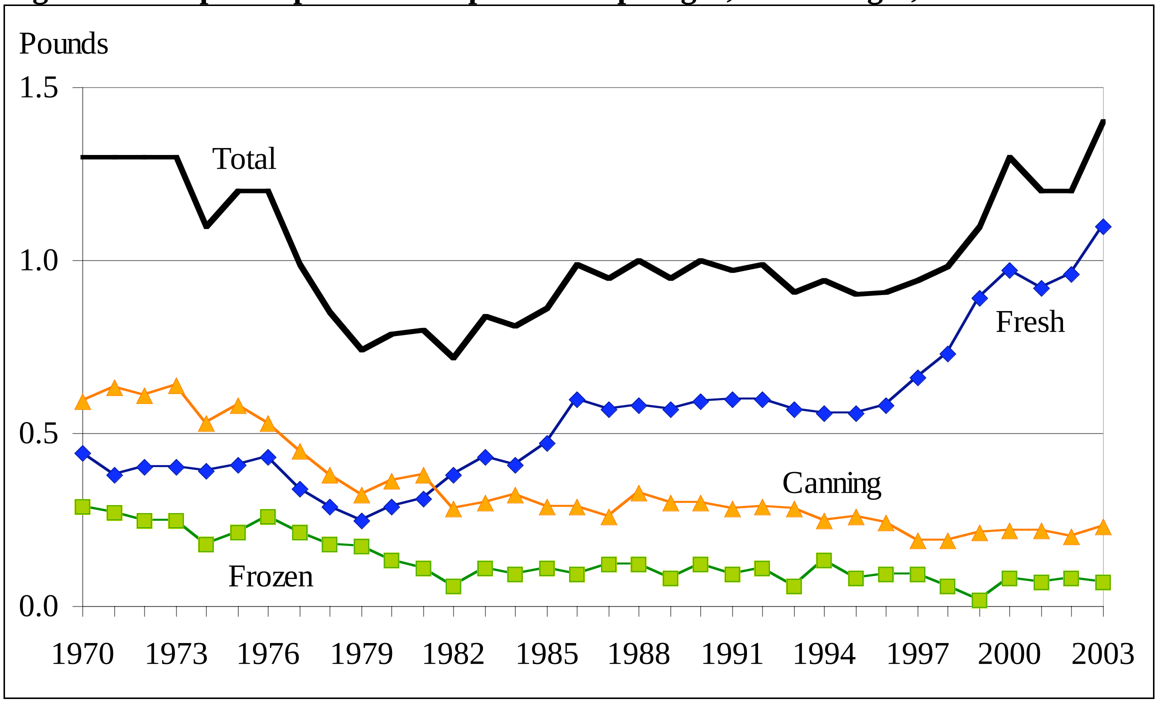
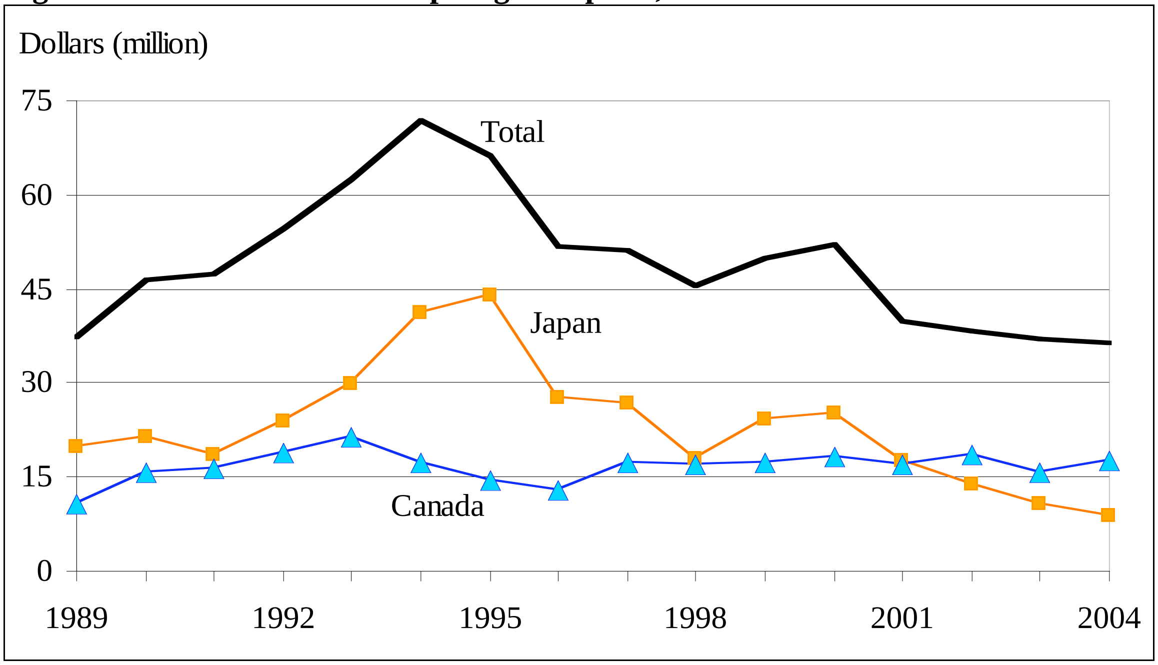
FIGURES

Figure 1. U.S. per Capita Consumption of Asparagus, fresh weight, 1970-2003



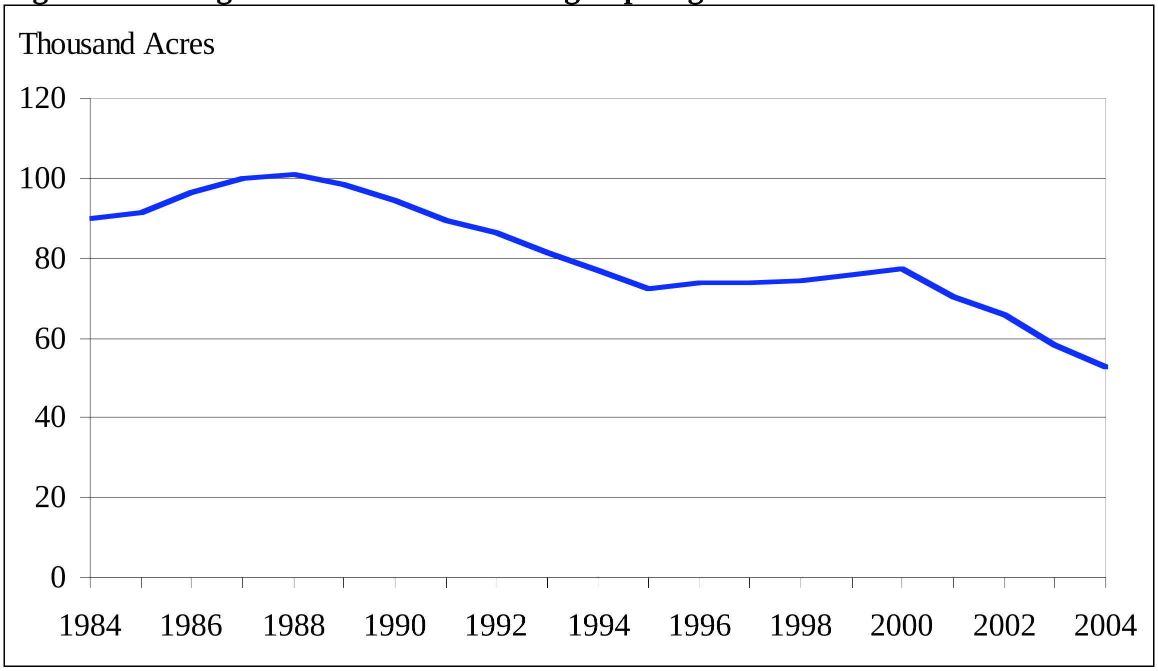
Source: USDA Economic Research Service, Food Consumption Data System

Figure 2. U.S. Fresh/Chilled Asparagus Exports, 1989-2004



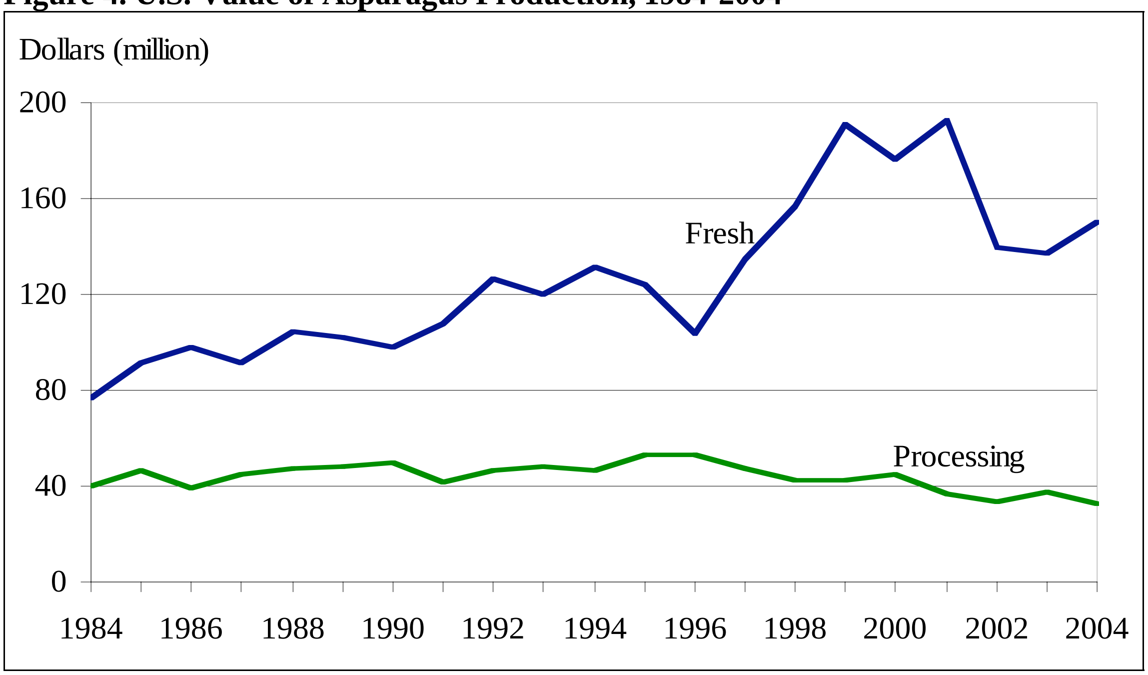
Source: USDA Foreign Agricultural Service

Figure 3. Acreage of Fresh and Processing Asparagus



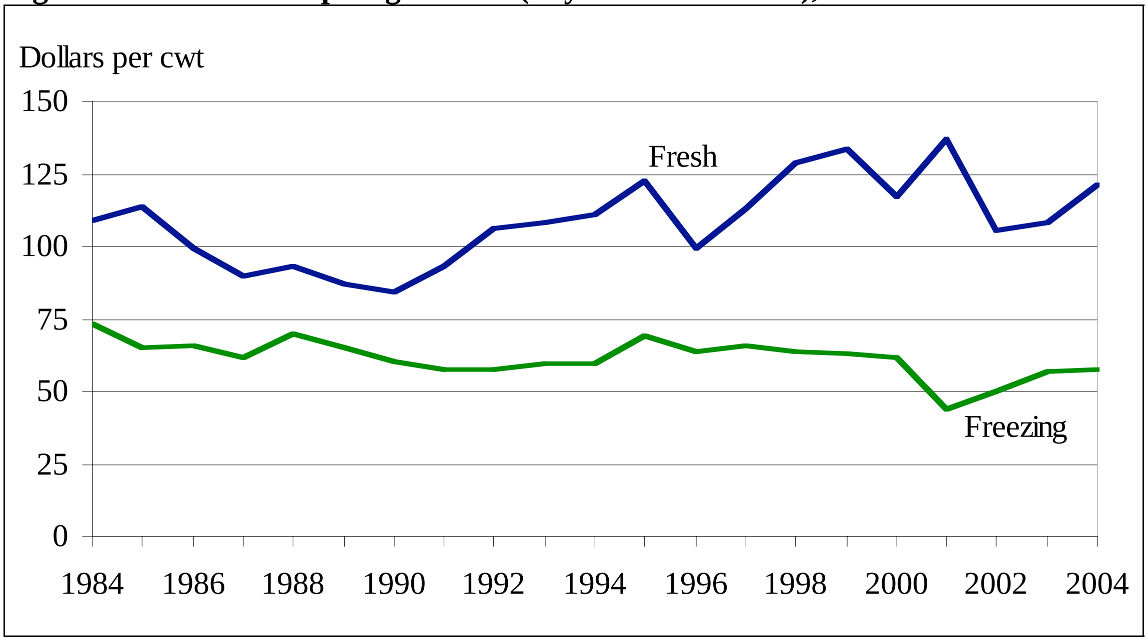
Source: USDA Economic Research Service, Vegetables and Melons Yearbook

Figure 4. U.S. Value of Asparagus Production, 1984-2004



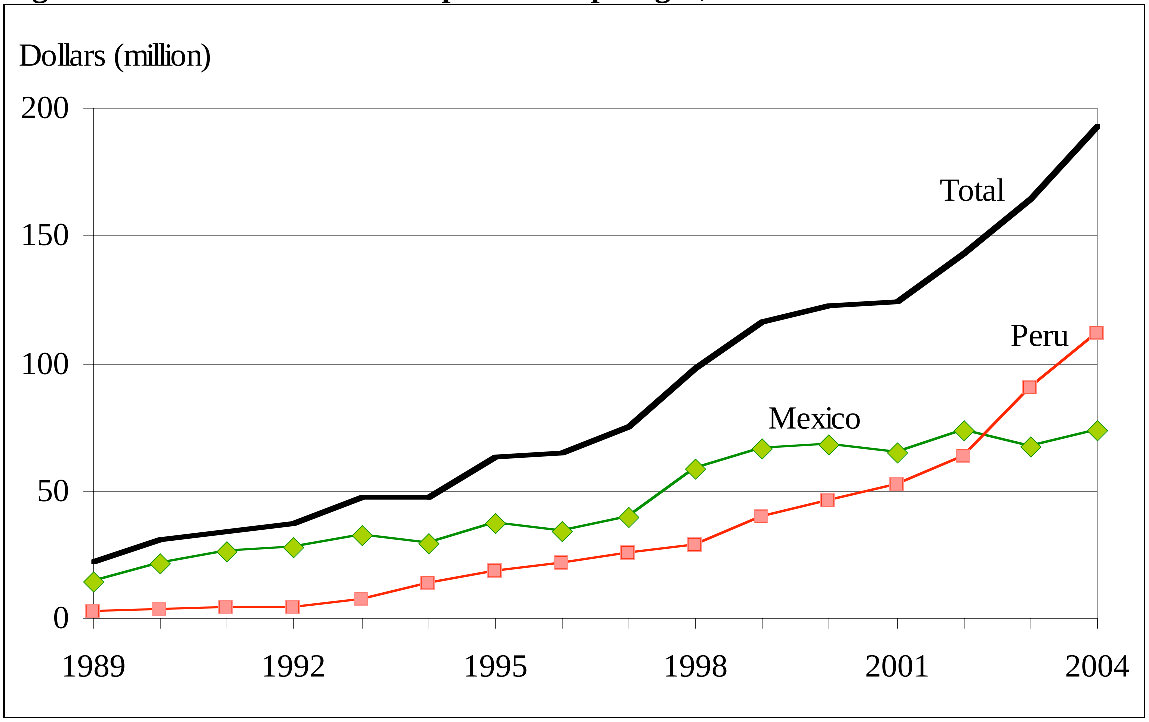
Source: USDA Economic Research Service, Vegetables and Melons Yearbook

Figure 5. U.S. Fresh Asparagus Price (in year-2000 dollars), 1984-2004



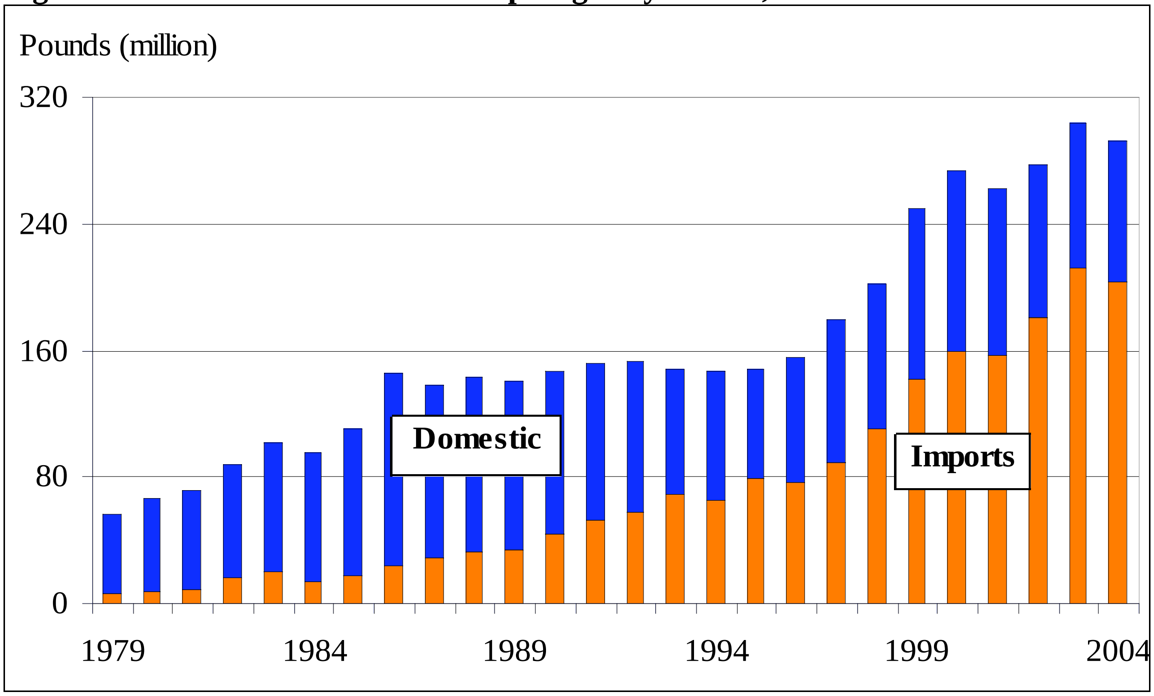
Source: USDA Economic Research Service, Vegetables and Melons Yearbook

Figure 6. Total Value of U.S. Imports of Asparagus, 1989-2004



Source: USDA Foreign Agricultural Service

Figure 7. U.S. Utilization of Fresh Asparagus by Source, 1979-2004



Source: USDA Economic Research Service, Vegetables and Melons Yearbook