



Commodity Profile: Carrots

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Overview

In 2004, carrots ranked seventh in terms of value of all fresh market vegetable crops in the United States behind tomatoes, head lettuce, onions, snap beans, sweet corn, and bell peppers. Total U.S. carrot production for the fresh and processing markets was valued at \$577.5 million in 2004 (National Agricultural Statistics Service (NASS)). The value of production of fresh carrots increased from \$251.9 million in 1990 to \$518 million in 2004. Carrots used for processing were valued at \$34.4 million in 2004, up from \$28.6 in 1990 (Figure 1).

In the United States, carrot production is highly mechanized and highly concentrated. Both carrots used for processing and fresh carrots use mechanical harvesting techniques and only two major California firms account for the majority of all carrot products sold (ERS 2003).

Demand

Demand for carrots has increased over the last two decades of the 20th century reaching a high of 18.2 pounds per person in 1997 (Figure 2). In recent years, however, demand has declined, falling to 11.9 pounds per person in 2004. The majority of consumption is attributable to demand for fresh carrots. Demand for processing carrots (including freezing and canning) has been variable and substantially less than fresh market consumption. In 2004, per capita consumption of carrots used for freezing and canning was 1.5 pounds and 1.6 pounds respectively (Figure 2). According to consumer surveys, factors influencing increased consumer demand for carrots include convenience, taste, and health consciousness given that carrots are a good source of vitamins and minerals and have been shown to contain cancer-preventing agents (ERS 2003). In addition, value-added products including peeled baby carrots and other fresh-cut items have gained in popularity.

Exports

The United States is a net exporter of carrots (Figure 3). In 2004 U.S. exports of fresh carrots accounted for 10.5 percent of total production and exports of frozen carrots

accounted for 1 percent of total U.S. production of carrots for freezing. The total value of processing and fresh carrot exports amounted to \$94.4 million in 2004. During the Canadian-United States free trade agreement (CUSTA) and the NAFTA era, U.S. carrot exports rose constantly from \$16.2 million in 1989 to \$ 94.4 million in 2004. Nearly 90 percent of U.S. exports were shipped to Canada. The next largest markets for U.S. carrots in 2004 were Mexico and the Netherlands, each accounting for less than 4 percent of the total value of exports. In 2003, the world's largest carrot exporters were the United States, the Netherlands, and Italy, while the largest import markets world-wide were Canada and Germany.

Supply

In 2004, 26.8 million cwt of U.S. carrots for fresh consumption were harvested from 83,900 acres. U.S. carrot farmers produced another 9.4 million cwt of carrots for processing from about 15,760 harvested acres. Acreage for fresh carrot production has decreased from 113,660 acres in 1996 to the current level of 83,900 acres (Figure 4). Processing acreage decreased from 25,720 acres to 15,760 acres during the same time period.

The top three fresh carrot producing states in 2004 were California, Michigan and Colorado. During the same period, Washington, California and Wisconsin were the top producers of carrots for the processing market. California accounted for nearly 75 percent of all the fresh market production, while Michigan and Colorado accounted for 5 percent and 4 percent of the total U.S. fresh carrot production. For processing carrots, Washington was the top producing state in the nation in 2004, accounting for about 37 percent of production. California, the second ranked state, contributed another 32 percent, followed by Wisconsin with 20 percent of the processing carrot production.

According to figures from the Food and Agricultural Organization of the United Nations (FAO), China was the world's leading producer of carrots in 2004, accounting for 35 percent of total world production. Russia was the second largest producer, accounting for 7 percent of the total, and the United States a close third at 6 percent.

Imports

Total U.S. carrot imports were \$42.6 million in 2004, up from \$18.2 million in 1989 (Figure 3). Interestingly, Canada and Mexico—the top export markets for U.S. carrots—accounted for almost all of U.S. carrot imports. Nearly 60 percent (\$25.2 million) of U.S. carrot imports were received from Canada in 2004. In the same year, Mexico accounted for 15 percent (\$6.6 million). According to Canada Statistics, the majority of Canadian carrots that were shipped to the United States went to northeastern U.S. states. U.S. imports of fresh carrots accounted for 8.2 percent of domestic consumption and imports of frozen carrots accounted for 6 percent of domestic consumption of frozen carrots (ERS 2005).

Prices

When taking into account inflation, prices for fresh carrots have been variable over the years but have followed a generally decreasing trend. Prices for processing carrots have

also decreased although their prices have always been much lower than prices for fresh carrots. In 2004, the average price for fresh carrots (in 2000 dollars) was \$18.76 per cwt, down from the 20-year high of \$21.28 in 1984 (Figure 5). Prices for processing carrots were \$3.71 per cwt in 2004, down from \$4.90 per cwt in 1980.

Sources

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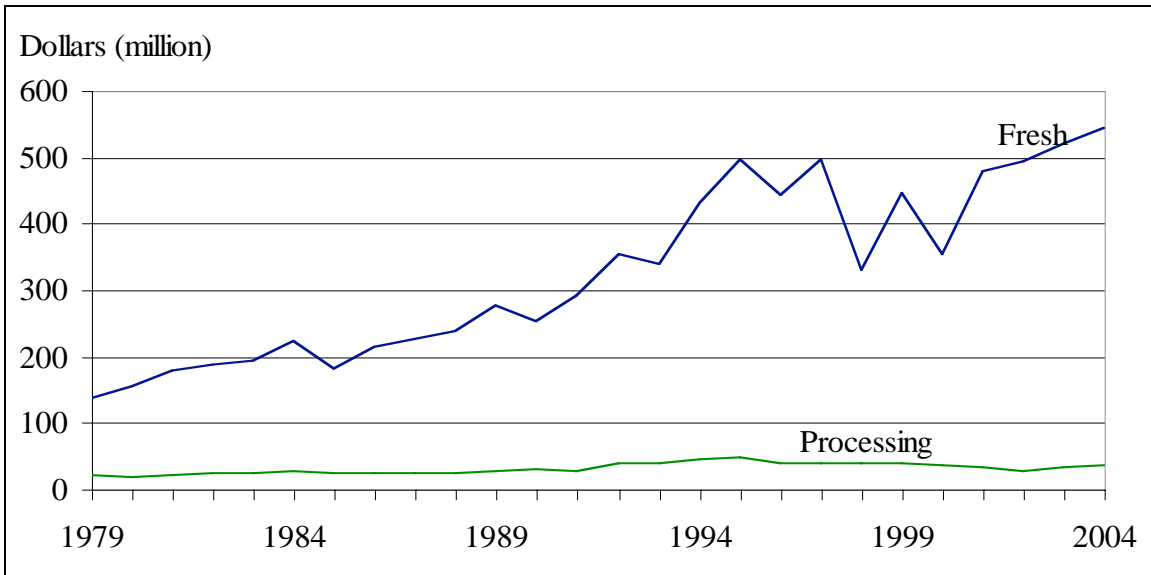
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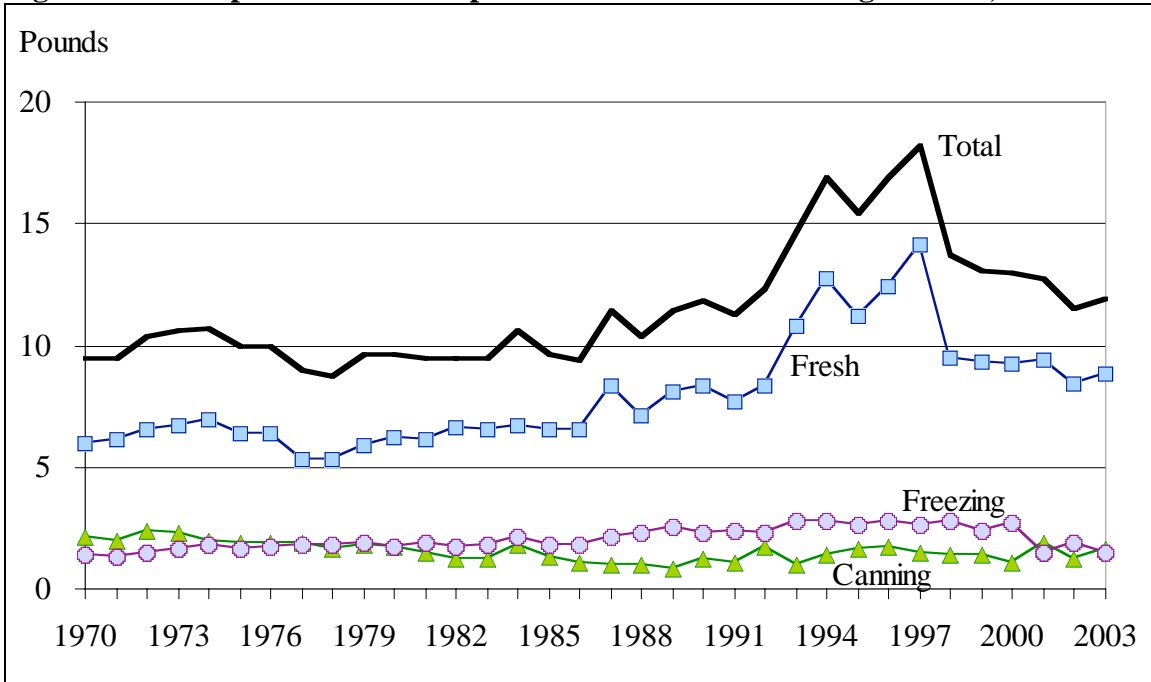
FIGURES:

Figure 1. Value of U.S. Production of Fresh Market and Processing Carrots, 1979-2004



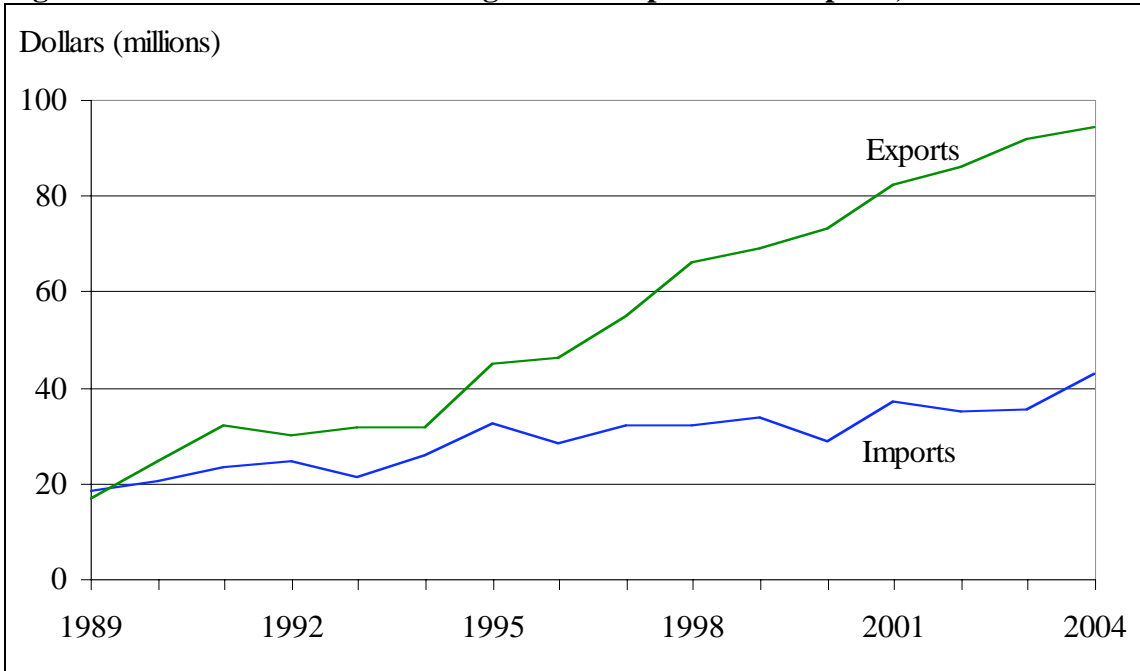
Source: USDA Economic Research Service, *Vegetables and Melons Yearbook*

Figure 2. Per Capita U.S. Consumption of Fresh and Processing Carrots, 1970-2003



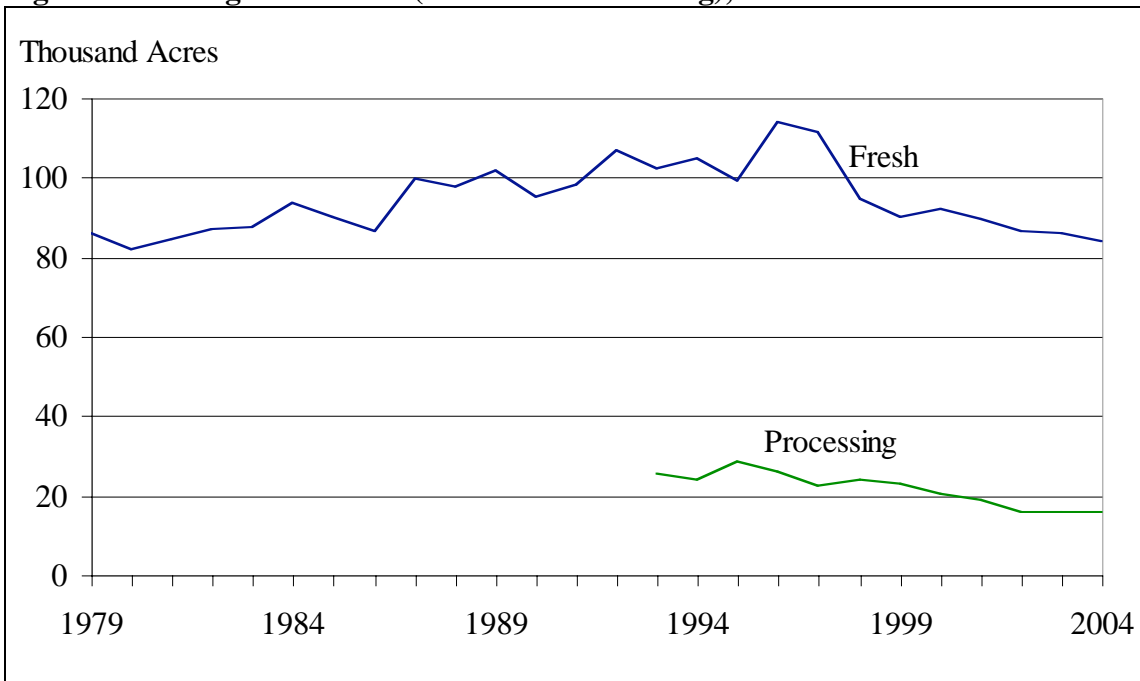
Source: USDA Economic Research Service, *Food Consumption Database*

Figure 3. U.S. Fresh and Processing Carrot Exports and Imports, 1989-2004



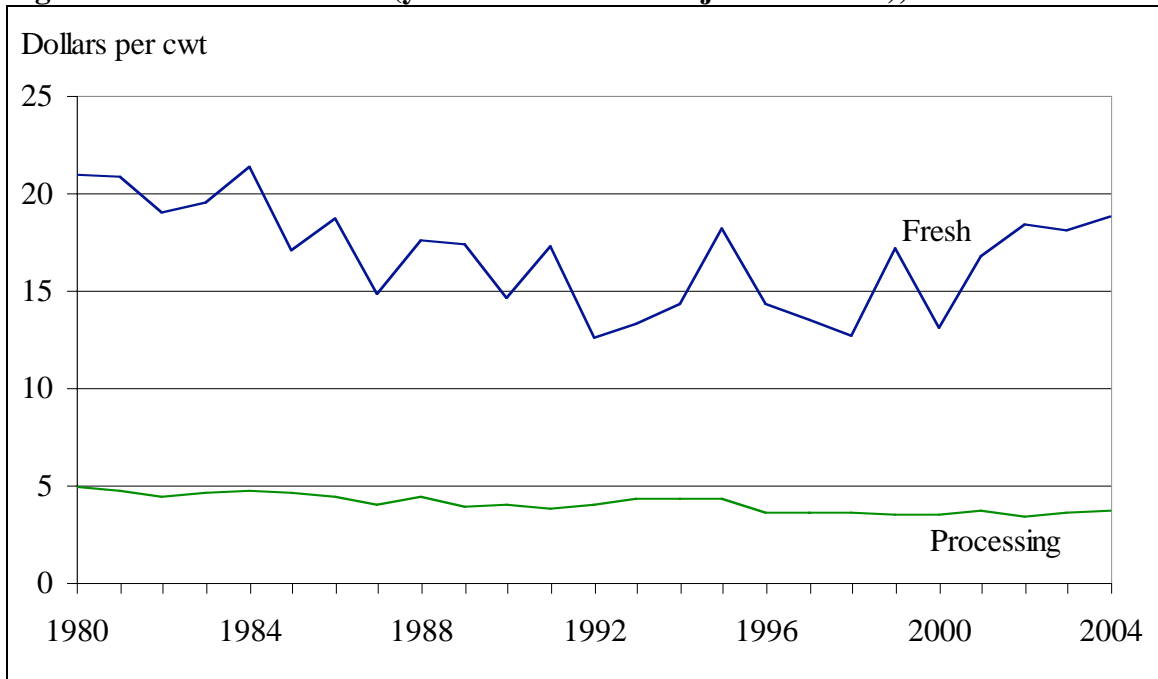
Source: USDA, Foreign Agricultural Service

Figure 4. Acreage of Carrots (Fresh and Processing), 1979-2004



Source: USDA Economic Research Service, Vegetables and Melons Yearbook

Figure 5. U.S. Carrot Price (year 2000 inflation-adjusted dollars), 1980-2004



Source: *USDA Economic Research Service, Vegetables and Melons Yearbook*