

Commodity Highlight: Carrots

Carrots, a cool-season crop, are members of the parsley family and are thought to have originated in western Asia near Afghanistan. Early European settlers brought carrot seeds to America. Virtually devoid of fat, carrots are also low in calories and sodium and provide dietary fiber, potassium, and vitamin C. However, the carrot's main nutritional claim to fame is as a leading source of several carotenoids, particularly beta-carotene, which the body converts to vitamin A. Vitamin A is essential for such things as vision, regulation of cell development, healthy skin, and immune system response.

Domestic fresh carrot consumption has increased substantially over the past 2 decades. Excluding melons, carrots are now the fifth most consumed fresh vegetable in the United States. Consumer surveys have shown that carrots are eaten for a variety of reasons including taste, convenience, and various health-related reasons such as cancer prevention, vitamin/mineral intake, calorie control, and fiber. Driven by these factors, use of fresh-market carrots averaged 10.2 pounds per capita during 2000-2002—up 26 percent from 1990-92 and 62 percent above 1980-82.

Despite the long-term rise, average use of fresh-market carrots has steadily declined since peaking at a record 13.1 pounds during 1996-98. Carrot use had steadily risen to that point after falling to 5.5 pounds during 1977-79. The reasons for reduced use are not clear, but may reflect the efficiency of fresh-cut products, which has likely led to less waste throughout the production and marketing channel. This in turn may have reduced the total volume of product required at the farm level, even as the incidence of carrot consumption may have risen. Similar consumption trends have been noted for other vegetables with fresh-cut sectors such as head lettuce and broccoli.

The United States produces 8 percent of the world's carrots—second behind China and just ahead of Russia. According to the Census of Agriculture, carrots were

Table 12--Fresh-market carrots: World production

Item	1995	2001	2002	Change
				2001-02
				Percent
--Million cwt--				
China	80.6	134.7	145.8	8.2
United States	41.4	40.5	36.9	-8.8
Russia	26.1	32.6	33.5	2.8
Poland	18.0	20.3	19.8	-2.5
United Kingdom	11.4	13.6	15.4	13.2
Others	187.1	216.4	212.2	-2.0
World	364.6	458.1	463.6	1.2

Source: Food and Agriculture Organization, United Nations.

produced on 1,865 farms in 1997—down 9 percent from 1992 but 18 percent higher than reported in the 1987 census. Fresh-market carrots account for 72 percent of all U.S. carrot output. During the 2000-02 period, California (with year-round output) accounted for 76 percent of the fresh-market carrot crop, followed by Colorado (6 percent) and Michigan (5 percent). USDA production statistics group fresh-cut products with fresh-market statistics.

In the United States, carrot production is highly mechanized. With few exceptions, carrots for both fresh and processing use are machine harvested, although the varieties used for each market tend to differ. The shipping side of the fresh carrot market is highly concentrated, with the two largest California firms accounting for the majority of the products sold.

The United States is a net exporter of fresh-market carrots. In 2002, more than 11 percent of supplies were exported (mostly to Canada)—up from less than 7 percent during the 1990s and the largest share on record. Meanwhile, 7 percent of consumption was satisfied by imports (largely from Canada and Mexico) in 2002—up from 6 percent during the 1990s.

For the most recent information, see:

<http://www.ers.usda.gov/publications/vgs/>

Table 11--U.S. fresh-market carrots: Supply, utilization, and price

Year	Supply			Utilization			Season-average price	
	Production 1/	Imports 2/	Total	Exports 2/	Domestic	Per capita use	Current dollars 1/	Constant dollars 3/
-- Million pounds --						Pounds	-- \$/cwt --	
1980	1,393.2	108.7	1,501.9	101.2	1,400.7	6.15	11.30	19.69
1990	2,110.6	122.1	2,232.7	158.7	2,074.0	8.29	11.90	13.76
1998	3,593.5	179.2	3,772.7	255.5	3,517.2	12.74	12.00	11.63
1999	3,130.0	184.8	3,314.8	262.3	3,052.5	10.93	16.80	16.05
2000	3,059.8	167.5	3,227.3	276.5	2,950.8	10.47	13.10	12.26
2001	3,146.4	201.4	3,347.8	309.1	3,038.7	10.64	17.20	15.72
2002	2,902.7	190.2	3,092.9	351.6	2,741.3	9.50	19.00	17.17
2003 f	2,880.0	200.1	3,080.1	312.4	2,767.7	9.49	--	--
2004 f	2,975.0	197.2	3,172.2	324.4	2,847.8	9.66	--	--

-- = Not available. f = ERS forecast. 1/ Source: National Agricultural Statistics Service, USDA. 2/ Source: Bureau of the Census, U.S. Department of Commerce. For 1980, exports were adjusted by ERS using Canadian import data. 3/ Constant dollar prices were calculated using the GDP deflator, 1996=100.