

## Commodity Highlight: Figs

### *Top Five Producing Nations Grow More Than Half of World Fig Production*

With origins in Western Asia and the Mediterranean, the fig (*Ficus carica*) is a member of the Moraceae (mulberry) family. Unlike most other *Ficus* species, it is the only one being cultivated for fruit production. Today, it is estimated that over 1.0 million metric tons of figs are produced around the world each year, with Turkey, Egypt, Greece, Iran, and Morocco leading in production. Turkey grows close to a quarter of the world's production and combined, the top five producers make up over 60 percent of the total crop. Rounding out the top 10 producers are Spain, Algeria, the United States, Syrian Arab Republic, and Tunisia.

### *California Dominates U.S. Fig Production*

Fig production in the United States is concentrated in California. Although commercial fig production now exists in at least 14 U.S. States, California houses more than half of all the farms growing figs in the country and produces 98 percent of the total crop,

based on the 1997 Census of Agriculture.

Most of California's fig production is centered in the San Joaquin Valley, where the soil and climate, especially the hot, dry summers, provide ideal conditions for growing the crop. The top three counties for producing figs are Madera, Merced, and Fresno. Much of the remaining U.S. crop is produced in Texas, Louisiana, South Carolina, and Mississippi. The U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS), however, only reports annual production and price data for figs in California (table 14).

Spanish missionary priests introduced figs into California, planting them at the San Diego Mission in 1759, followed by other plantings at other missions as far north as Sonoma. Although familiarity with the crop increased since then, commercial production did not begin until about 1885. Presently, the California fig industry produces between 40,000 to 60,000 short tons of figs annually, generating \$12.0 to \$24.0 million in farmgate value.

Table 14--Figs: Production, utilization, and season-average grower price, California, 1980 to date

Year	Production 1/	Utilization		Grower price		
		Fresh 2/	Processed	Fresh	Processed	All
		--Short tons--		--Dollars/ton--		
1980	45,450	2,100	43,350	493.00	297.00	306.00
1981	38,200	1,600	36,600	542.00	320.00	329.00
1982	37,700	1,100	36,600	461.00	273.00	278.00
1983	34,000	850	33,150	3/	3/	206.00
1984	36,500	2,000	34,500	3/	3/	288.00
1985	32,600	1,400	31,200	3/	3/	305.00
1986	50,000	1,400	48,600	3/	3/	283.00
1987	52,300	1,750	50,550	3/	3/	331.00
1988	55,500	1,500	54,000	3/	3/	352.00
1989	48,000	1,500	46,500	3/	3/	379.00
1990	49,600	1,600	48,000	3/	3/	350.00
1991	45,100	1,300	43,800	3/	3/	369.00
1992	46,900	1,300	45,600	3/	3/	405.00
1993	60,700	2,800	57,900	3/	3/	401.00
1994	56,700	2,100	54,600	3/	3/	419.00
1995	52,400	2,000	50,400	3/	3/	314.00
1996	45,500	2,000	43,500	3/	3/	283.00
1997	57,500	2,000	55,500	3/	3/	265.00
1998	51,300	1,800	49,500	3/	3/	226.00
1999	47,300	2,000	45,300	3/	3/	268.00
2000	55,900	4,000	51,900	3/	3/	272.00
2001	41,000	2,000	39,000	3/	3/	365.00
2002	53,200	2,500	50,700	3/	3/	331.00
2003	46,500	3,000	43,500	3/	3/	475.00

1/ Production all utilized. 2/ Small quantities of canned figs are included in fresh to avoid disclosure of individual operations.

3/ Not published to avoid disclosure of individual operations, but included in all.

Source: National Agricultural Statistics Service, USDA.

## ***Most Figs Are Processed***

Approximately 95 percent of California's fig production is processed annually. That leaves only a small proportion of its annual crop that is hand picked for the fresh market. Depending on variety-type, one or two crops may be harvested during the crop year. Harvesting occurs from June through October. Because most of the crop is processed, figs are available to consumers all year long.

Nearly all figs that are intended for processing are allowed to fully ripen and partially dry on the tree before falling to the ground to complete the drying process, either by sun or mechanical dehydration. This includes processed products such as diced, sliced, and chopped figs, fig paste, and fig concentrate. Besides the figs for fresh-market consumption, a miniscule share of production is also harvested fresh for canning.

## ***Commercial Production Limited to Only A Few Varieties***

There are many varieties of figs available but only a few are grown commercially in California. Figs produced in the State are classified into two types, Smyrna and the common fig. These two botanical types are based on the need for pollination and fertilization to produce the fruit. The Smyrna fig requires pollination, specifically by a fig wasp (*Blastophaga psenes*), for fruit set to occur while the common fig does not. The Smyrna-type fig commercially grown in California is the Calimyrna while the major common-type figs are Mission, Kadota, and Adriatic.

The Calimyrna is a large yellow-skinned fig noted for its sweet and nut-like flavor and processed primarily as dried fruit or paste. The Mission has a deep purple skin that turns black when dried. It is used primarily for dried fruit, paste, or juice concentrate. The Kadota is seedless and has a thick skin that is creamy amber in color when ripe. It is widely used for canning, preserving, and fig paste. The Adriatic is a favorite in making fig bars and pastes because its high sugar content is retained when drying the fruit, helping it to achieve a golden shade.

Based on production statistics reported by the California Fig Advisory Board (CFAB), the entity responsible in administering the State marketing

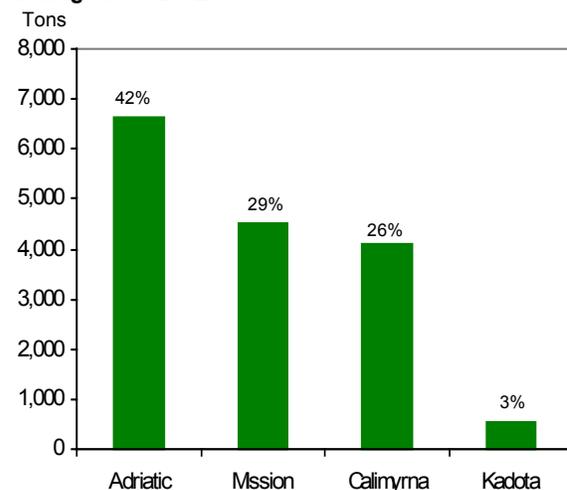
order for California dried figs, the Calimyrna variety accounts for the largest area in fig production, averaging 43 percent of bearing acres during 1998 to 2002. However, the Adriatic variety makes up the largest share of total dried fig production in the State, averaging 42 percent during the same period (fig. 3). Relative to the Calimyrna variety, higher dried fig production from Adriatic figs, which account for 25 percent of bearing acreage, are attributed to the following:

- The average yield per tree is generally higher.
- Some new Adriatic acreage during the 1990s had closer planting density.
- Adriatic figs produce two crops during the crop year while only one crop is harvested for the Calimyrna variety.
- There has been an increasing proportion of Calimyrna figs being harvested for the fresh market where there has been a growing interest over the last 5 years.

## ***Food Manufacturing Industry Dominates the Market for Dried Figs***

The bulk of California's processed dried figs are sold to food manufacturers, primarily cookie makers and makers of the increasingly popular energy bars. These food manufacturers use processed dried fig products such as paste, concentrate, and sliced, diced, and chopped figs as an ingredient in their product.

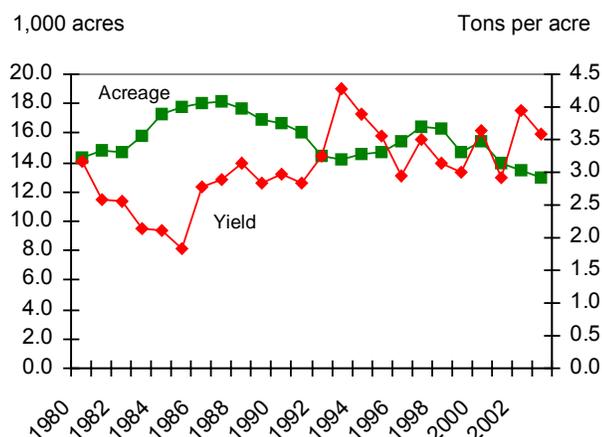
Figure 3  
**California dried fig production, by variety, average 1998-2002**



Source: California Fig Advisory Board.

Figure 4

**California figs: Bearing acreage and average yields per acre**



Source: National Agricultural Statistics Service, USDA.

During 2002, 74 percent of California's processed dried figs were packaged as manufacturing figs. In the same year, 14 percent were packaged as bulk, typically whole figs in 30-pound containers, and distributed mainly to health food stores and restaurants. Fig processors market the remaining share of processed dried figs in various 8- to 12-ounce size packages which consumers buy off the shelf at retail grocery stores.

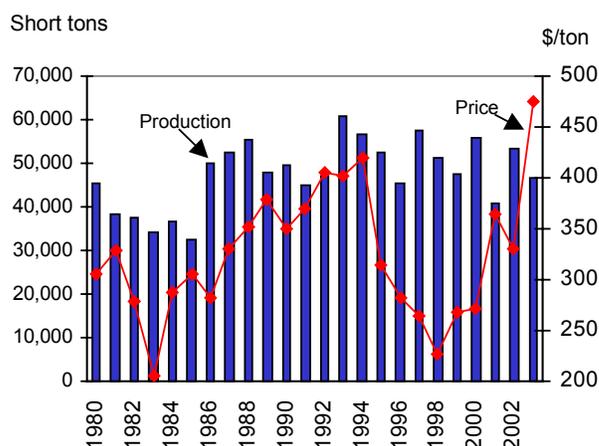
***Domestic Production Slipping, Prices Improving***

As with many other fruit crops, weather factors have influenced volatility in California's annual fig production. Nevertheless, production in 7 out of the 10 successive years following the record-large crop in 1993 declined from the previous year, with the second 5-year (1999-2003) output averaging 7-percent lower than average production during the first 5 years (1994-1998). Although the average yield per acre during 1999 to 2003 remained unchanged from the previous 5 years, fewer bearing acres resulted in lower production during the most recent 5 years (fig. 4). Fig producers responded to the bleak period during the mid- to late-1990s, when grower prices were falling amidst declining production (fig. 5), by reducing acreage through most of the period from 1999-2003.

During 1995 to 1999, bearing acreage increased almost yearly but rapidly declining average yields resulted in declining production. Poorer yields may

Figure 5

**California figs: Total production and average grower price**



Source: National Agricultural Statistics Service, USDA.

perhaps be due to lower input use in an effort by growers to remain profitable.

Trends in the dried fig sector drives the overall market for California figs and hence, production and price movements for dried figs closely parallel the overall market (table 15). Following years of relatively stagnant demand, producers began to realize a growing surplus of dried figs in the market beginning in 1997, according to CFAB. Estimated U.S. consumption of dried figs has averaged 0.40 pound to 0.50 pound per person for over a decade. In an effort to regain market stability, the dried fig industry managed to remove a significant amount of surplus in 2000 by diverting surplus supplies to the cattle feed industry, according to CFAB. As such, carryover inventories of dried figs have dropped to more manageable levels, and grower prices have improved. Some dried fig products in the form of whole figs as well as pieces and paste for trail mixes have also been purchased by USDA for distribution to child nutrition and other domestic food assistance programs even prior to 1997. Since the 1990s, purchases were made in fiscal years 1996-98, 2000-01, and 2004. Another factor aiding in boosting processing fig prices is the growing demand for fresh figs that has surfaced over the last 5 years. According to CFAB, this increase in demand has strengthened fresh-market fig prices as well as diverted some processing production to the fresh market.

Table 15--California dried fig production and average grower price

Year	Production				Price		
	Fresh basis	Dried basis		Total	Fresh basis	Dried basis	
		Standard	Sub-standard			Standard	Sub-standard
		---- Tons ----				---- Dollars per ton ----	
1980	43,350	11,400	3,050	14,450	296.0	1102.0	90.0
1981	36,000	10,000	2,000	12,000	323.0	1150.0	60.0
1982	36,600	9,650	2,550	12,200	273.0	1020.0	65.0
1983	33,150	9,000	2,050	11,050	200.0	722.0	65.0
1984	34,500	9,800	1,700	11,500	279.0	973.0	45.0
1985	31,200	8,570	1,830	10,400	283.0	1020.0	45.0
1986	48,600	12,450	3,750	16,200	267.0	1030.0	40.0
1987	50,550	14,100	2,750	16,850	317.0	1130.0	40.0
1988	54,000	15,850	2,150	18,000	337.0	1140.0	60.0
1989	46,500	13,800	1,700	15,500	373.0	1250.0	60.0
1990	48,000	13,600	2,400	16,000	320.0	1120.0	60.0
1991	43,800	13,200	1,400	14,600	347.0	1140.0	60.0
1992	45,600	13,900	1,300	15,200	393.0	1290.0	60.0
1993	57,900	17,100	2,200	19,300	367.0	1230.0	60.0
1994	54,600	17,000	1,200	18,200	400.0	1280.0	38.0
1995	50,400	15,200	1,600	16,800	298.0	981.0	77.0
1996	43,500	13,100	1,400	14,500	258.0	848.0	80.0
1997	55,500	15,900	2,600	18,500	233.0	801.0	78.0
1998	49,500	13,300	3,200	16,500	198.0	722.0	60.0
1999	43,200	13,800	1,300	15,100	227.0	739.0	60.0
2000	51,000	15,400	1,900	17,300	224.0	747.0	60.0
2001	39,000	11,700	1,300	13,000	308.0	1020.0	60.0
2002	50,700	15,000	1,900	16,900	289.0	972.0	50.0
2003	43,500	12,900	1,600	14,500	441.0	1480.0	60.0

Source: National Agricultural Statistics Service, USDA.

The all-grower price for figs began rebounding in 1999, reaching a record-high average of \$475 per ton in 2003. In the last 3 years, grower prices moved inversely with production as typically expected in a relatively stable market.

### ***Imports Diminishing Role in Domestic Consumption***

The United States is the world's fifth largest importer of dried figs, next to Germany, France, Italy, and Hong Kong. During the period 1998 to 2002, 6 percent of world import volume, on average, was destined for the U.S. market. Spain and Turkey are its primary suppliers, accounting for about 75 percent of U.S. dried fig imports. Greece, Portugal, and Mexico are also important suppliers.

The United States has generally remained a net importer of dried figs for over two decades now. However, with domestic demand remaining relatively stagnant over the years, imports' role in U.S. dried fig consumption has been declining on average. Over the past three seasons (2000/01-2002/03) the United States imported an average of 39.0 million pounds of dried figs (fresh-weight equivalent), making up 34 percent of all domestically consumed dried figs. This import share of domestic consumption has dropped

from an average of 60 percent during the mid- to late-1970s, to 40 percent during the 1980s, and 36 percent during the 1990s. Below-average volumes were imported in the marketing seasons 1995 through 2000, a period in which the industry had to deal with excess supplies and declining grower prices.

### ***The United States is Among the Leading World Exporters***

The top three exporters of dried figs in the world are Turkey, Iran, and Greece. Turkey, the largest producer, supplies more than half of world export volume while Iran and Greece account for 12 percent and 6 percent, respectively.

In the United States, over 18 percent of dried fig production is sold in several foreign markets. With production also among the highest in the world in terms of quantity and quality, the United States ranks as the world's seventh largest exporter of dried figs, supplying 3 percent of total volume. Canada is the destination for about half the volume. Japan and Hong Kong are also major markets.

For the most recent information, see: <http://www.ers.usda.gov/publications/fts>