# Commodity Highlight: Watermelon

Cultivated for thousands of years, watermelon is thought to have originated in Africa and made its way to America with African slaves and European colonists. With a 2-percent share, the United States currently ranks fourth in worldwide watermelon production—averaging 39.2 million cwt in 2000-02. Grown in most States, about three-fourths of U.S. production during 2000-02 originated from Florida (20 percent), Texas (17 percent), California (16 percent), Georgia (13 percent), and Arizona (7 percent).

Watermelon is the leading U.S. melon crop in terms of planted area (176,827 acres in 2000-02), production, and per capita consumption. Because of higher unit values, cantaloup is the leading melon in terms of crop value. During 2000-02, the farm value of watermelon production averaged $282 million—up 19 percent from a decade earlier.

Although value and production have been rising, the acreage devoted to watermelon has been trending lower over the past few decades. During the most recent decade, declining acreage has likely been a combination of rising per acre yields and successive years of freeze damages in Florida and drought in Texas. Increased watermelon yields reflect improved varieties and a larger proportion of acreage covered by irrigation, especially in States like Texas. In addition, seedless varieties now account for a substantial portion of the watermelon crop. With much higher seed costs and more challenging cultural requirements, seedless melons tend to be more intensively managed—resulting in less crop abandonment and higher yields.

Most watermelon is consumed fresh, although there are several processed products in the market such as roasted seeds, pickled rind, and watermelon juice for which no data are currently available.

Per capita watermelon use began trending higher after bottoming out in 1980 at a record low 10.7 pounds (use data begin with 1919). Domestic use of watermelon surged heading into the 1990s, with annual consumption that decade averaging 14.7 pounds per capita—up 16 percent from 12.7 pounds during the 1980s. The increase in the 1990s was likely the result of better marketing (e.g. more pre-cut and wrapped product), increased promotion efforts, new smaller varieties better suited to shrinking American household size, surging popularity of seedless melons, and a strong national economy featuring high employment levels. Some of the increase may also be due to rising public awareness of the impact on overall health of including fruits and vegetables in the diet.

In the new millennium, watermelon consumption has since leveled off and declined about 1 pound/person since the most recent peak in 1998 (use is forecast to total 14.8 pounds per person in 2003). Although there could be several reasons for this decline, one plausible explanation may involve changes in the type of watermelon demanded—namely smaller "icebox melons", including smaller seedless types that have become very popular since the early 1990s. Per capita use is a weight-based volume measure, which may be accurately reflecting declining average melon weight. At the same time, per capita use can not reflect possible increases in eating occasions of smaller individual melons and pre-wrapped melon quarters. Because of thinner rinds and less waste, the increased marketing of new mini "personal" seedless watermelons could eventually result in declining per capita use, even as the number of eating occasions rises.

According to a USDA food consumption survey, the bulk (85 percent) of watermelon are purchased at retail stores and considered as home foods. The institutional market (community feeding centers, daycare facilities, etc.) was the strongest among the various away-from-home markets. Watermelon is heavily favored in the West and consumed about in proportion to population share in the Midwest and East. Per capita use is weakest in the South. (follow this link to a 2001 ERS article describing watermelon consumption).

Table 15--U.S. watermelon: 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 | 2,271.6 | 205.7 | 2,477.3 | 51.9 | 2,425.4 | 10.65 | 6.59 | 11.48 |
| 1990 | 3,187.1 | 228.6 | 3,415.7 | 94.4 | 3,321.3 | 13.28 | 6.66 | 7.70 |
| 1998 | 3,697.4 | 484.2 | 4,181.6 | 244.8 | 3,936.8 | 14.26 | 7.71 | 7.47 |
| 1999 | 4,115.3 | 481.6 | 4,596.9 | 292.2 | 4,304.7 | 15.41 | 6.47 | 6.18 |
| 2000 | 3,762.9 | 446.0 | 4,208.9 | 293.3 | 3,915.6 | 13.87 | 6.41 | 6.00 |
| 2001 | 4,064.8 | 483.5 | 4,548.3 | 249.7 | 4,298.6 | 15.08 | 6.77 | 6.19 |
| 2002 | 3,920.4 | 451.4 | 4,371.8 | 364.5 | 4,007.3 | 13.93 | 8.38 | 7.57 |
| 2003 f | 4,125.0 | 475.0 | 4,600.0 | 300.0 | 4,300.0 | 14.85 | -- | -- |

-- = Not available. f = ERS forecast. 1/ Source: National Agricultural Statistics Service, USDA. Production data were adjusted by ERS for 1970-81 to account for States not included in NASS estimates. 2/ Source: Bureau of the Census, U.S. Department of Commerce. From 1978-89, exports adjusted by ERS using Canadian import data. 3/ Constant-dollar prices calculated using GDP deflator, 1996=100.