



Commodity Profile: English Walnuts

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There are two major varieties of walnuts grown in the United States—the English walnut and the Black walnut. The English Walnut originated in Persia, and the Black walnut is native to the United States. The commercially produced varieties are nearly all hybrids of the English walnut. The Black walnut is of high flavor, but due to its hard shell and poor hulling characteristics it is not grown commercially for nut production. The Northern California Black walnut is primarily used as the rootstock for English walnut cultivars. The Eastern American Black walnut is grown east of the Rocky Mountains primarily for wood and veneer. California produces 99 percent of the nation’s commercial English walnuts with almost all production taking place in the Sacramento and San Joaquin valleys.

Marketing

Walnuts are typically sold as a snack item or for use as an ingredient in candies, cereals, and baked goods. Roughly 90 percent of walnuts are sold as shelled. Diamond Foods, a former cooperative that went public in 2005, is one of the largest U.S. processors of walnuts (ERS 2005). Roughly 40 percent of U.S. walnut production is utilized domestically, with an additional 25 percent kept for storage, and the remainder destined for the export market.

The California walnut industry is made up of over 5,300 walnut growers and about 55 walnut processors. Two main organizations oversee industry advertising efforts and regulation—the Walnut Marketing Board, established by a Federal Marketing Order for walnuts in 1948, and the California Walnut Commission, established through the California State Legislature in 1987. The Walnut Marketing Board is responsible for the U.S. quality control regulation, which mandates that all walnuts be inspected and certified as meeting strict USDA specifications. The Walnut Marketing Board also provides industry analysis and general domestic marketing services. The California Walnut Commission is primarily responsible for international market development.

Consumption

Prior to 1993, per capita consumption of walnuts remained relatively stable at about 0.5 pounds per capita. Consumption fell in 1993 to under 0.40 pounds per capita and after increasing in 1994, fell again in the two succeeding years (Figure 1). However, since the low in 1996 of 0.32 pounds, per capita consumption of walnuts has been on the rise, reaching a record of 0.54 pounds in 2004. Recent research supported by the industry found health benefits of walnut consumption because it is a good source of omega-3 fatty acids, vitamin E and other antioxidants associated with a healthy heart and a potential reduction of cancer cell growth (ERS 2005). The publicity surrounding these results has helped stimulate walnut demand. In addition, a 2005 report by the USDA's Economic Research Service suggests that the increased consumption in 2004 was due in part to the introduction of McDonald's fruit and walnut salad, which had an impact on consumption both directly, by increasing sales, and indirectly, by reminding consumers of alternative uses of walnuts.

Exports

The United States is the world's largest exporter of walnuts, exporting \$241 million worth in 2004. Mexico, Moldova, China and France round out the top five exporters in the world (FAO) with Mexico as number two. However, Moldova is primarily a re-exporting market of in-shell walnuts from the European Union which it processes and re-exports (ERS 2005).

The United States is a net exporter of walnuts, with U.S. imports of walnuts negligible in comparison—valued at less than half a million dollars in 2004. U.S. exports have continued to rise significantly from \$148 million in 1999 to more than \$241 million in 2004 (Figure 2). About 35 percent of the U.S. crop is destined for exports (ERS 2005). Shelled walnuts made up the majority of the export value at \$150 million, or 62 percent of the total, compared to in-shell exports worth \$92 million, or 38 percent of the total. Throughout the 1990s in-shell walnuts were the most important walnut export product of the United States, but since 2001, shelled walnut exports exceeded in-shell walnuts in export value.

For the United States, the European Union countries comprise the largest export market, accounting for nearly 40 percent of exports (Spain receiving 17.4 percent, Germany 13.1 percent, and Italy 9.4 percent). Japan ranks as the second largest individual country export market for U.S. walnuts behind Spain, accounting for 14.4 percent. Canada is the fifth largest individual country market accounting for 8.5 percent of total exports (Figure 3).

Supply

While the United States was the leading exporter of walnuts, China was the leading producer in 2004. Although the majority of China's production is consumed domestically, a limited amount of Chinese production meets the international standards for quality (ERS 2005). The United States ranks as the second largest producer in the world, followed by Iran, Turkey, the Ukraine, and India (FAO).

The value of production of walnuts in the United States has followed a clear upward trend for decades, decreasing in value from the previous year only 6 times since 1980, although sometimes notably (Figure 4). The U.S. value of walnut production in 2004 totaled a record \$438 million, which made walnuts the 6th highest valued fruit and tree nut crop in the United States (ERS 2005).

Production of walnuts has oscillated over the last two decades but has also followed an increasing trend (Figure 5). Much of the variability in production is due to the alternate bearing nature of walnut trees. Similarly, yields per acre have also been variable over the years and also have shown more significant increases in the last decade (Figure 6). Walnut yields have generally increased from about 1.2 tons per acre in the early 1980s to around 1.5 tons per acre in 2004.

The average size walnut farm in California is 46 acres and most orchards are family-owned or individually held farms (ERS 2005). Bearing acreage of walnuts remained relatively stable from 1980 into the early 1990s. Acreage increases were noticeable after 1993, when each subsequent year acreage remained either at present levels or increased (Figure 7). In 2004, bearing acreage reached a record 217,000 acres, up from 180,000 in 1980 and 178,000 in 1992.

Prices

On a shelled basis, walnut prices (in year-2000 inflation-adjusted dollars) have decreased since the early 1980 prices of almost \$2.50 per pound. Prices varied in the late 1980s and 1990s between \$1.50 and \$2 per pound, but in 1999 prices fell to a low of \$1.08 per pound. Since 1999, prices increased minimally, remaining below \$1.50 (year-2000 dollars) for the first 5 years of the new millennium (Figure 8). Also since 1999, prices for walnuts have been less variable, a trend ERS attributes to continued strong demand both domestically and abroad (ERS 2005). In 2004 the nominal price was \$1.55 per pound, the inflation adjusted price was \$1.42.

Sources

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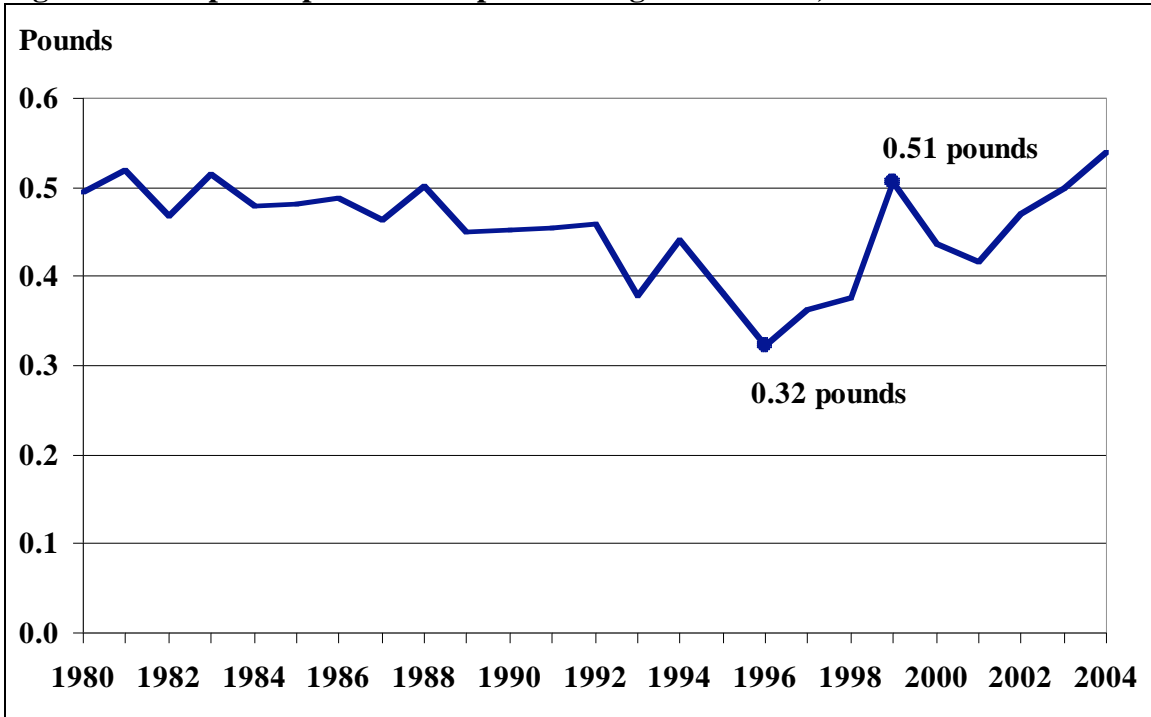
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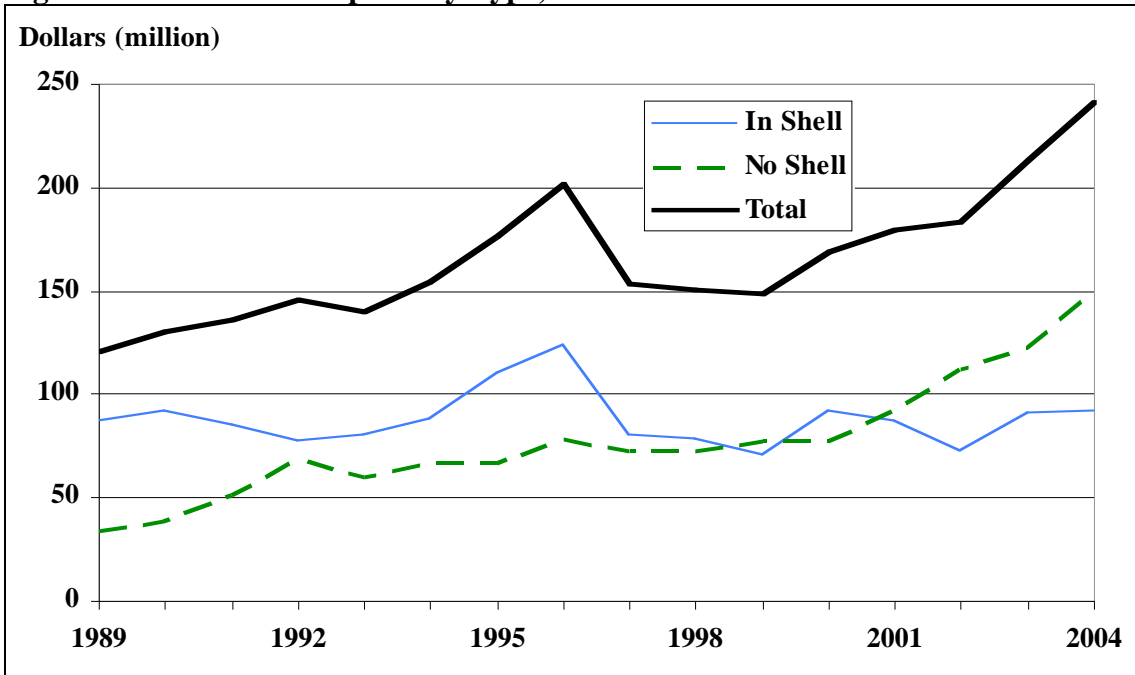
FIGURES

Figure 1. U.S. per Capita Consumption of English Walnuts, 1980-2004



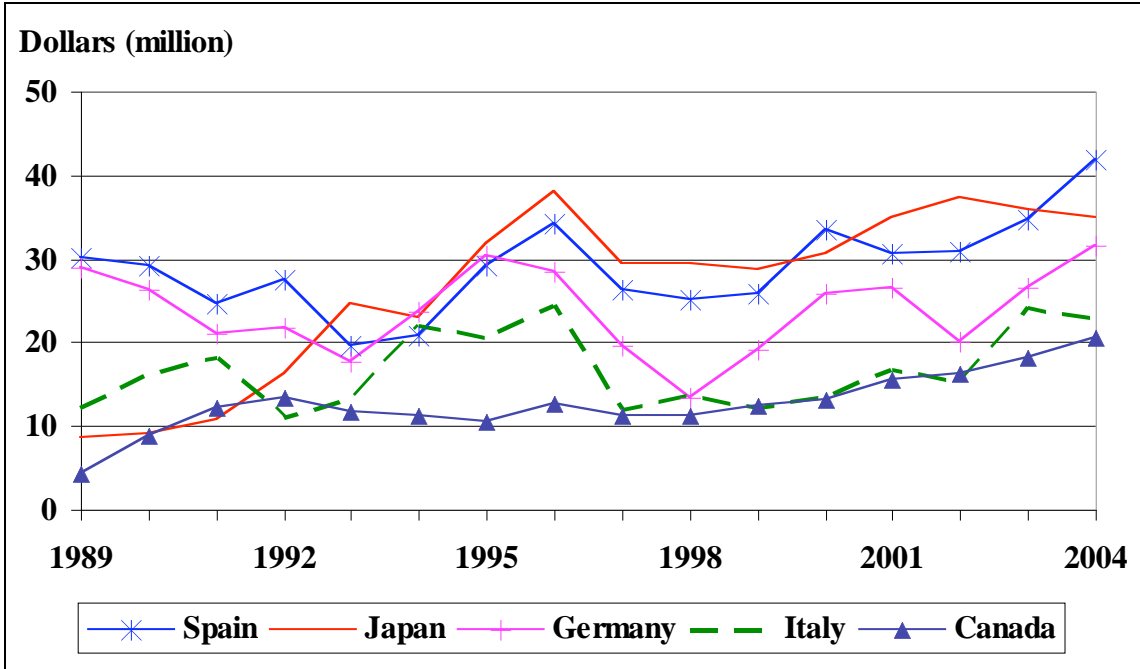
Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook

Figure 2. U.S. Walnut Exports by Type, 1989-2004



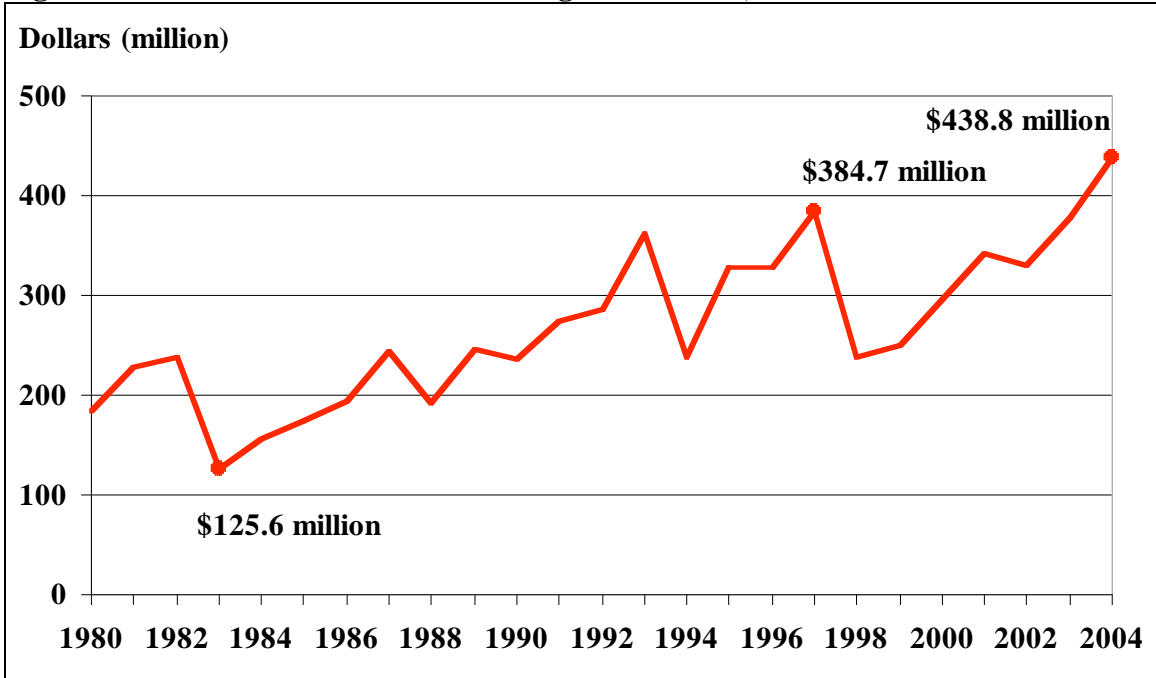
Source: USDA Foreign Agricultural Service

Figure 3. Top Five U.S. Walnut Export Markets, 1989-2004, ranked by exports in 2004



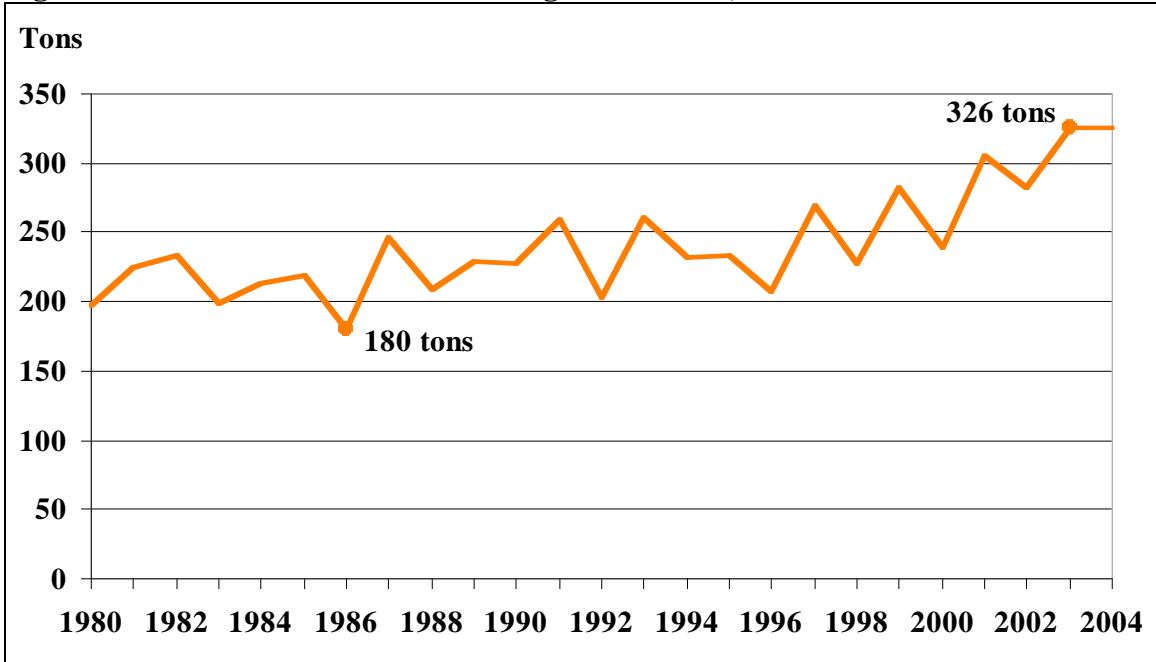
Source: USDA Foreign Agricultural Service

Figure 4. U.S. Value of Production of English Walnuts, 1980-2004



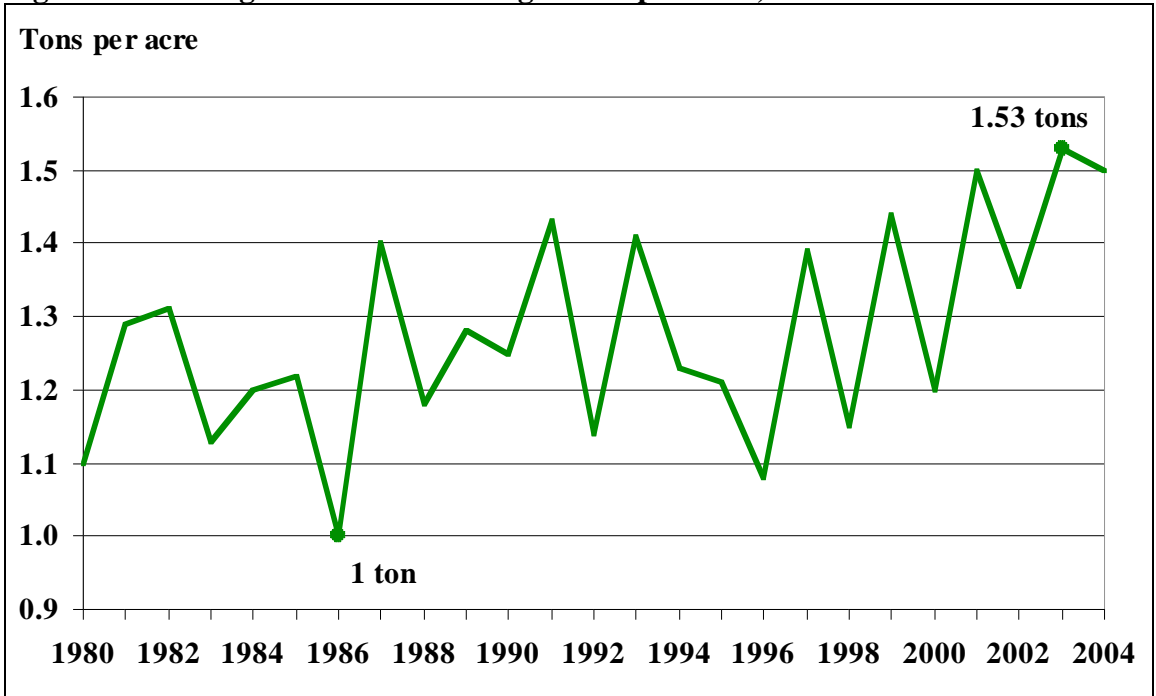
Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook

Figure 5. In-Shell Production of U.S English Walnuts, 1980-2004



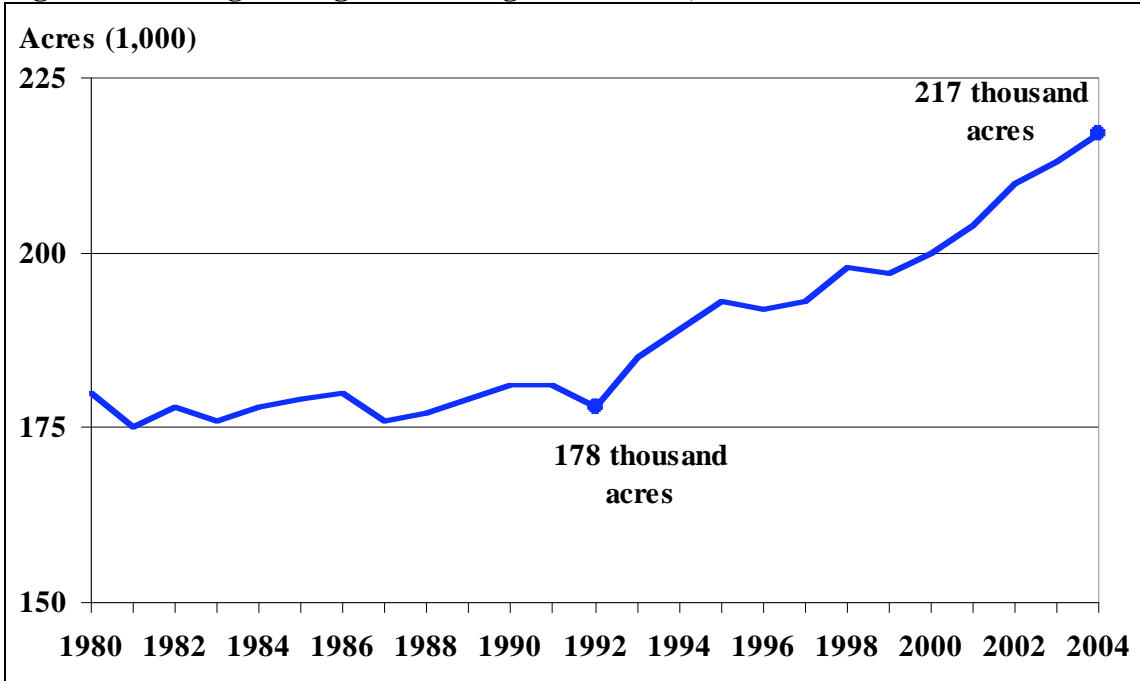
Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook

Figure 6. U.S. English Walnuts Average Yield per Acre, 1980-2004



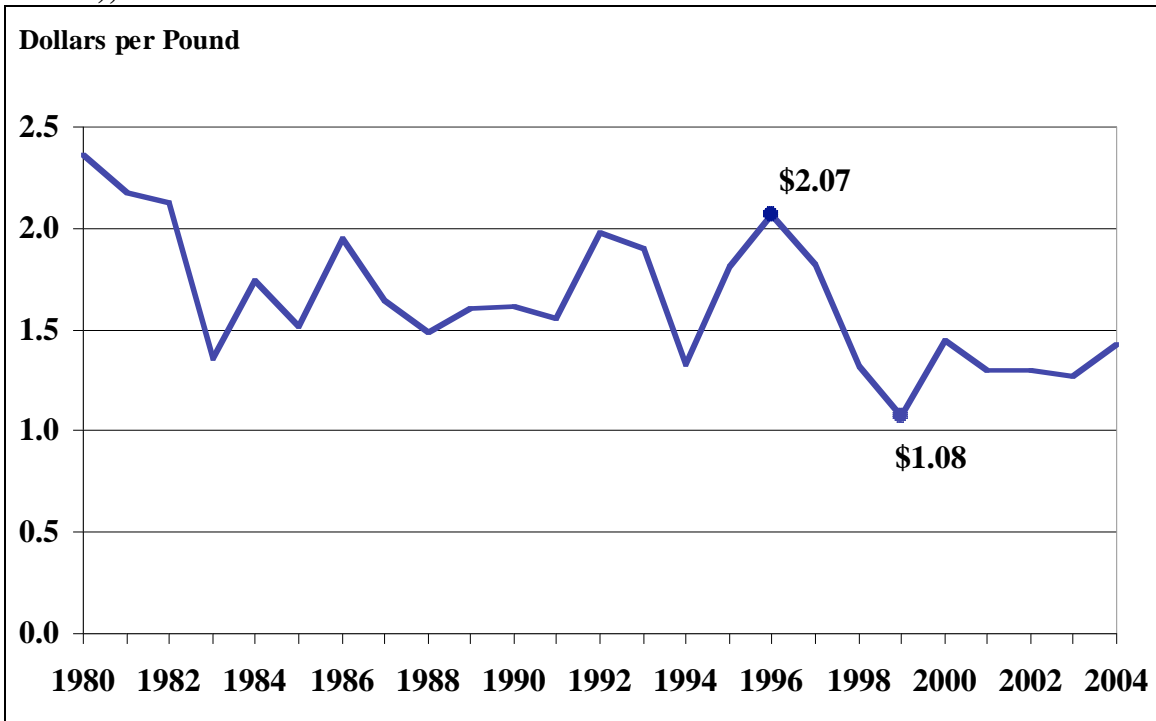
Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook

Figure 7. Bearing Acreage of U.S English Walnuts, 1980-2004



Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook

Figure 8. U.S. Grower Price of Shelled Walnuts (in year-2000 inflation-adjusted dollars), 1980-2004



Source: USDA Economic Research Service, Fruit and Tree Nut Yearbook