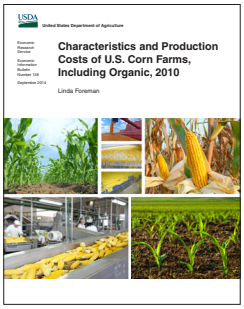
United States Department of Agriculture

A report summary from the Economic Research Service September 2014



Find the full report at *www.ers.usda.gov/publications/eib-economic-information-bulletin-report/eib128*

Characteristics and Production Costs of U.S. Corn Farms, Including Organic, 2010

Linda F. Foreman

What Is the Issue?

Higher corn prices boosted the returns to corn production and contributed to an increase in corn acres from 76 million in 2001 to 88 million in 2010. Among the various factors boosting prices was an increased share of corn being used to produce ethanol. By 2010, ethanol production consumed 5,019 million bushels or 35 percent of the supply, compared with 707 million bushels or 6 percent of the U.S. corn supply in 2001. Organic corn demand has grown in recent years, although organic corn production remains a small segment of overall corn production.

Higher returns and the boost in planted corn acres have changed the characteristics and practices of U.S. corn producers since 2001—the year assessed by the last comprehensive ERS report on corn production. Because aggregate data mask the diversity among corn growers, this study breaks down the data to examine differences in production costs and practices as well as farm and operator characteristics within various corn producer groups in 2010. In addition, data on corn production in 2010 and 2001 are compared to view the effects of the changing U.S. corn market.

What Did the Study Find?

Corn producers exhibited numerous differences in their production costs, yields, planted acres, farm incomes, and net returns from corn production.

Higher prices and higher yields allowed corn producers to achieve greater returns from corn production in 2010 than in 2001. As a result, 92 percent of corn producers could have covered their operating and ownership costs per bushel for corn based on harvest-month prices in 2010. Of those who did not cover their costs, many were producers in a pocket of the Southeast that experienced low yields due to drought, so they likely would have covered their costs under normal weather conditions. In 2001, only 59 percent of corn producers could have covered their operating and ownership costs per bushel from harvest-month prices.

The Heartland is known for its favorable corn growing conditions and continues to dominate U.S. corn production, with 66 percent of planted corn acres in 2010. Despite a 17-percent increase in planted corn acres between 2001 and 2010, the shares of corn acres and production across regions did not change significantly. Most low-cost producers were located in the Heartland.

In 2010, the average operating and ownership *costs per bushel* did not vary significantly by the number of planted corn acres per farm. In contrast, 2001 producers planting the fewest corn acres per farm had the highest costs per bushel mainly because of their lower yields.

In 2010, producers with the smallest corn enterprises (fewest acres) had the lowest average operating and ownership costs *per acre*, while producers with the largest corn acreage had higher costs per acre. In 2001, these costs per acre did not vary significantly by corn enterprise size. The higher per-acre production costs in 2010 for producers with larger corn enterprises may have stemmed from the fact that these producers were least likely to rotate corn with other crops (such as soybeans). The addition of 12 million acres of planted corn between 2001 and 2010 may have resulted in some less productive land added to corn production in 2010, which could have boosted average production costs per acre. In 2010, producers planting the most corn acres per farm (1,000 acres or more) held a larger share of total planted corn acres than in 2001**.**

In 2010, net returns from organic corn per bushel and per acre exceeded those from conventional corn. Higher prices for organic corn outweighed the effects from lower yields. Total operating and ownership costs per acre were not statistically different between organic and conventional corn. Most organic corn production occurred in the North, mainly in the Heartland and Northern Crescent. Compared with operators of conventional corn farms, operators producing organic corn planted fewer corn acres per farm while also operating smaller farms.

How Was the Study Conducted?

The author analyzed data from the 2010 Agricultural Management Resource Survey (ARMS) for corn. This survey collected data from conventional and organic corn producers in 2010. ARMS is the major annual economic survey conducted by ERS and the National Agricultural Statistics Service. Commodity versions of ARMS surveys are conducted on a rotating basis every 4 to 8 years to obtain data to support the commodity cost and return estimates. Previous ARMS corn surveys were conducted for the 2005, 2001, and 1996 growing seasons. In addition to comparing data collected in the 2010 ARMS to those from 2001, the author presents regional variation in costs from each of the last three corn surveys (2001, 2005, and 2010). ERS data on the corn production costs and returns, estimated using the ARMS data, were also used in this study.