



U.S. Corn Growers Meet the Need for Food and Fuel

American farmers have the tools to meet the world's need for food, feed and fuel, and we've got the yields to prove it.

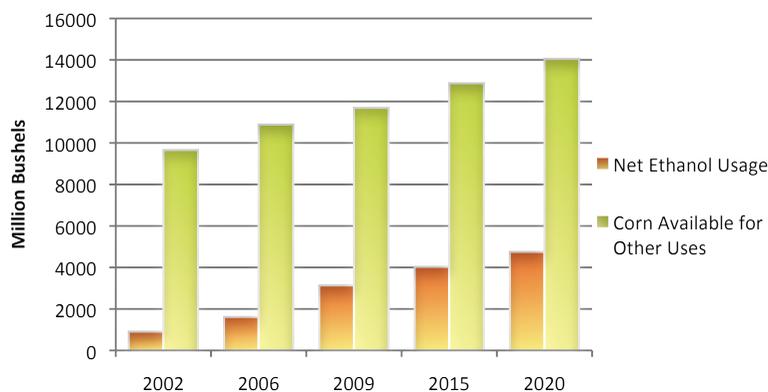
Technology Helps Corn Keep Pace with Demand

Some worry that ethanol creates an either-or, food-or-fuel scenario in terms of meeting demand. However, thanks to advances in seed technology, improved agricultural efficiency, innovations in biofuels production and other breakthroughs, this is not the case.

With food processing, livestock feed and export markets for corn steady, more corn will be available for biofuels production. In 2010, ethanol processors will use 4.4 billion bushels of corn compared to last year's total of 3.7 billion. However, this still leaves an increased supply of corn for other uses. In fact, after new corn demand for ethanol production was met in 2009, there was still an additional 187 million bushels of production available for livestock feed, export or other domestic uses.



Corn Usage - Ethanol and All Other Uses



Ethanol production tripled from 2002-2009. During the same time period, corn production met increased ethanol demand and produced an additional 21 percent more corn available for other needs.

Source: U.S. Department of Agriculture, WASDE; Pro Exporter Network

Agriculture is not the industry it was a generation ago. It is high-tech and highly efficient, with new innovations being utilized in the field every day. If the versatility of corn can address our needs for energy, security, mobility and nourishment, why not let it reach its potential?

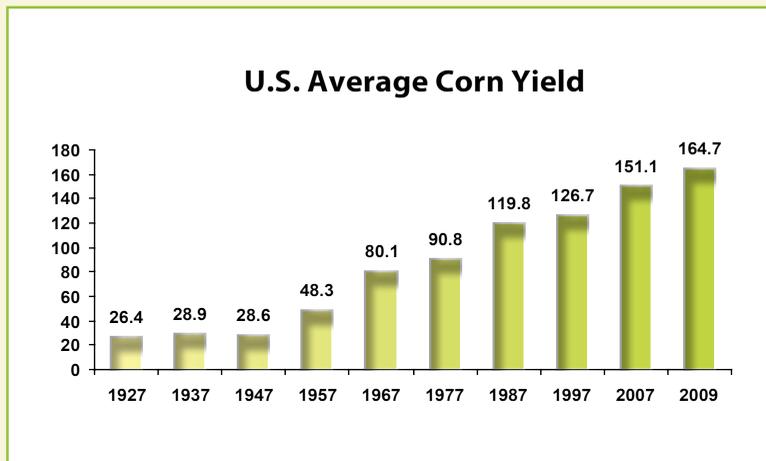
In the past five years, growers have produced the five largest corn crops in its history. The 2009/2010 season delivered another record breaking harvest with the USDA reporting over 13 billion bushels harvested despite challenging weather conditions across the country. On average, corn yields have increased by about three bushels per acre per year since the 1995/1996 crop year. Based on the 10-year historical trend, average corn yield could exceed 175 bushels per acre by the 2015/2016 crop season.

“Advanced biotechnologies are protecting plants better than ever, helping the plants to achieve their full grain yield potential.”

Robb Fraley
Chief Technology Officer
Monsanto¹

“Distillers grains are a vitally important co-product of U.S. ethanol production from grain. The increasing availability of distillers grains is providing livestock and poultry feeders around the world with a feed source that can partially displace the need for corn, soybean meal, and other ingredients in feed rations.”

Geoff Cooper
Vice President of Research and Analysis
Renewable Fuels Association²



Source: U.S. Department of Agriculture

Where Does All This Corn Go?

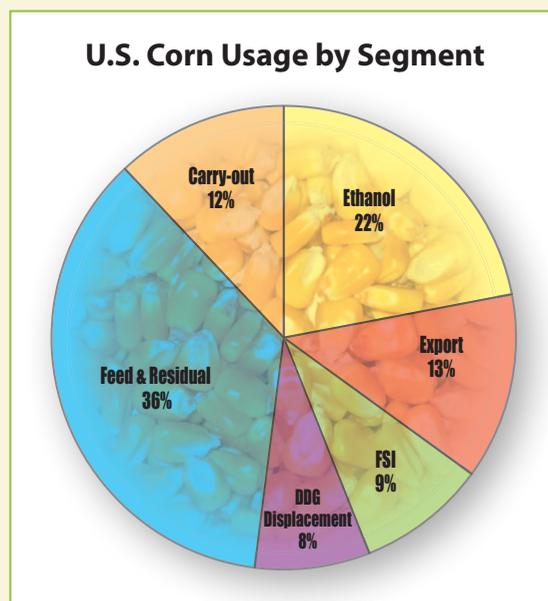
All but 1 percent of the corn America produces is field corn. Domestic livestock consumes the largest amount of field corn grown in this country. In fact, livestock feed and DDGs can be attributed to 44 percent of 2009/2010 U.S. corn utilization. At the same time, effective ethanol production accounted for about 22 percent of corn usage, approximately 13 percent was exported, and only 9 percent was used for human food, seed and industrial use.

Ethanol – Energy’s Triple Solution

When raw field corn goes into an ethanol plant, it’s not just ethanol that comes out. The ethanol process converts only the starch from the kernel to ethanol. An ethanol plant produces a lot more than just ethanol from corn. Since only the starch from the kernel is used to make corn-based ethanol, corn’s value continues even after ethanol is produced. In the dry grind ethanol process, co-products such as protein, fat and other nutrients are used to produce feed products. Every 56-pound bushel of corn used in the dry grind ethanol process yields nearly 3 gallons of ethanol and 18 pounds of distillers grain. In addition to producing 2.7 gallons of ethanol, a bushel of corn in the wet mill ethanol process produces 13.5 pounds of corn gluten feed and 2.6 pounds of high-protein corn gluten meal for livestock, as well as corn oil, corn syrup and other additives for use in human food and industrial products.

In the 2009/2010 season, ethanol plants are predicted to produce approximately 30 million metric tons of distillers grains and displace over 1 billion bushels of livestock feed. The result is more corn available for use in other markets.

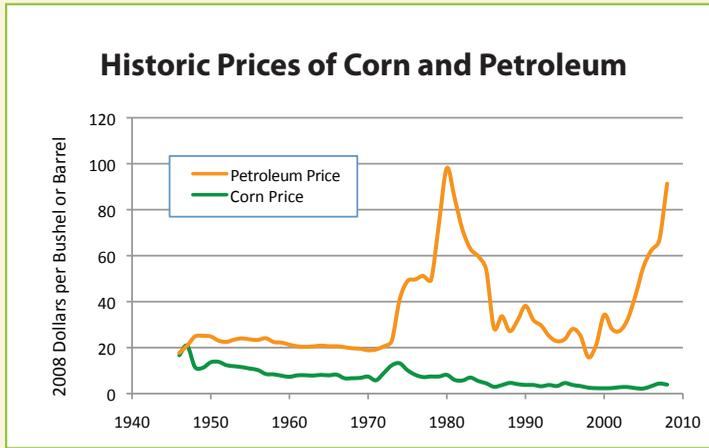
According to the Food and Agriculture Organization of the United Nations, there is more food today per capita on a global scale than ever before. The problem with food scarcity is due to lack of infrastructure, access to capital, political unrest, and other factors, not supply.



Source: Pro Exporter Network

Corn Continues to be a Good Buy Regardless of Price

According to a report from Barclays Capital, even at its record levels corn price was still 42 percent below its inflation-adjusted peak. In fact, in less than one year from its peak, corn prices decreased more than 50 percent. If corn prices were rising as fast as oil, today's bushel of corn would sell for \$13.50 instead of around \$3.50.



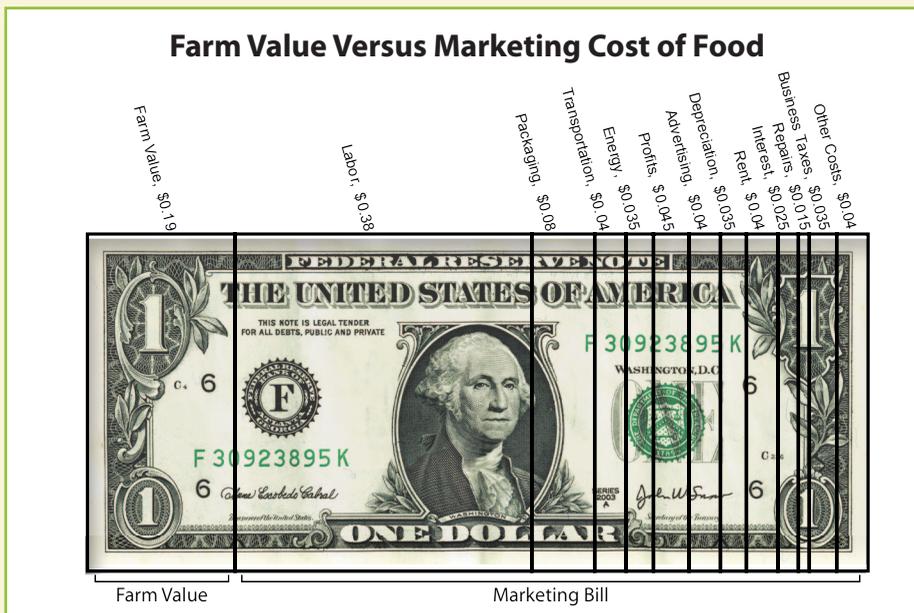
Source: U.S. Department of Agriculture, U.S. Energy Information Administration

In the last decade, corn prices have been historically low making jumps in price seem disproportionately high. A study by economists at Tufts University found that below-cost feed saved the broiler chicken industry \$11.25 billion and integrated pork industry \$8.5 billion in costs between 1997 and 2005. In fact, 10 of the top U.S. retail food companies averaged a 14 percent increase in net profit from 2008 to 2009.

It's important to recall that one of the reasons the ethanol industry was created was to add value to America's agricultural output, restore economic vitality to rural areas and reduce federal agricultural payments. In fact, the ethanol industry supported nearly 400,000 jobs in all sectors of the economy and added \$53.3 billion to the nation's Gross Domestic Product in 2009.

Retail food products such as cereals, snack foods and beverages contain very little corn. Therefore, fluctuations in the price of corn are not often reflected in the retail prices for these items. Other cost factors have much greater impact. According to the USDA, only 19 cents of every dollar spent on food in the United States goes to farmers. And corn farmers get only a few cents of that. Labor costs add 38 cents, while packaging, transportation, energy, advertising and profits account for 24 cents.

Marketing costs (the difference between the farm value and consumer spending for food at grocery stores and restaurants) has risen from 67 percent in the 1980s to 80 percent today.



U.S. Department of Agriculture, Economic Research Service

“If we were really crowding out food, why are we feeding more? Overlooked in rising food prices is the rising price of crude oil itself.”

T. Randall Fortenbery
Director
RENK Agribusiness
Institute
University of Wisconsin,
Madison³

“Biofuels are a vital component of America's energy future, helping to break our dependence on oil. This commitment reflects the Obama Administration's support for a strong biofuels industry helping to increase income for farmers and jobs in rural America.”

Secretary Tom Vilsack
U.S. Department of
Agriculture⁴

“The farm price is less than one-fifth of the cost of food so it doesn’t have much of an impact.”

Ephraim Leibtag
Economist
USDA Economic Research
Services⁵

“What happens to commodity (grain) prices is meaningful but it does not dominate what happens to retail food prices. Energy has roughly twice the impact as commodities on food prices.”

John Urbanchuk
Economist and Technical
Director
Entrix⁶

What Really Affects Food Prices

Overlooked in the analysis of rising food prices is the increasing price of crude oil. Petroleum is used extensively in agriculture, both as fertilizer and for transportation. In April 2009, the Congressional Budget Office released a report analyzing the effects of ethanol on food prices. The study concluded that ethanol may be responsible for 0.5 percent of the rise in food prices between 2007 and 2008. The bulk of the price increase (or 85-90 percent) actually came from other factors such as oil/energy cost increases and a weak dollar that boosted export demand.

Similarly concluded in a recent report commissioned by the British government was that biofuels have very little effect on commodity prices. The report noted, “[All] available evidence suggests that biofuels had a relatively small contribution to the 2008 spike in agricultural commodity prices. Whilst commodity prices have fallen steeply from their peaks in 2008 biofuel demand has remained steady – indicating that the causal link from biofuel demand to short-term crop prices is still relatively weak.”⁷

The Bottom Line

Also overlooked is the fact that higher global grain prices and the development of a world biofuels trade are creating economic opportunity for small farmers around the world which allows them to earn a profit on their crops for the first time.

Consumers also enjoy an offset in gasoline prices due to ethanol. Economists at Iowa State University found, “...the growth in ethanol production has caused retail gasoline prices to be \$0.29 to \$0.40 per gallon lower than would otherwise have been the case.”⁸ Similarly, recent analyses conducted jointly by the U.S. Departments of Energy and Agriculture found, “...if we had not been blending ethanol into gasoline, gasoline prices would be between 20 cents per gallon to 35 cents per gallon higher.”⁹

Now, as always, corn growers understand that meeting the demands of a growing world market cannot come at the expense of the environment, dependable food or economic viability. Innovation has brought about exciting new opportunities in agriculture, and corn farmers are already taking advantage of them. Their livelihood depends on it.

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