

# Unplanned Realities of the Boom in Ethanol

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For thousands of years Agriculture has been the art and science of cultivating land in the raising of crops to feed humans and livestock. Over the last 75 years we have become very productive in Agricultural activities. In 1932, the U.S. harvested 90 million acres of corn at 25 bushels per acre resulting in a total crop of 1.2 billion bushels. By 2006, corn acreage had declined to 78.6 million, and yields at 151.1 bushels per acre, the second highest after 160.2 bushels in 2004, resulted in a crop of 10.7 billion bushels.

In the last two years corn has moved beyond being a food and feed commodity for domestic and export markets. Corn has become a growing source of fuel-ethanol. Ethanol utilized about two percent of the corn crop in 1982. Feed use and exports accounted for 88 percent of the total use. In the 2007-2008 marketing year about 26 percent of the corn crop will be used for ethanol production. The increase in ethanol production first impacted the corn market in the fall of 2006 as more ethanol plants came on line.

Despite the fact that the 2006 crop would be the third largest on record, the price of corn in Chicago rose from \$2.10 per bushel on September 13 to \$3.48 on December 14, 2006. By mid February corn prices pushed \$4.00 per bushel. This run up in the corn market during harvest did not go unnoticed by grain farmers. A new “corn economics” was underway. Last spring farmers planted 85.4 millions acres of corn for grain, the most since 1933. Most of the extra 15 million acres planted to corn came from reduced soybean planting. Soybean acreage fell 15 percent. At planting time corn seemed to be a more profitable choice than soybeans.

It was no surprise that the first USDA crop report on September 10 projected the corn crop for 2007 at 13.1 billion bushels, up 24 percent from a year ago and a new record high. The surprise was that the futures market actually increased the day the report was released. This is an example of “irrational exuberance.” More was to follow. The October report released on the 12th, projects the crop will be 2 percent larger than expected in the September report. The same day the report was released, the price for December futures rose 15 cents to \$3.56, the highest level since late June. Storing the 2007 crop will be a major and possibly price depressing factor as harvest winds down in November and December.

The push for ethanol production is a “feel good” alternative to purchasing Mideast oil. Government grants and a 51 cent per gallon subsidy are great incentives to build more ethanol plants. There is also a 54 cent per gallon tariff on imported ethanol from Brazil the largest producer and exporter of ethanol, utilizing sugar cane. The problem with ethanol produced from corn is that it takes nearly as much energy to produce a gallon of ethanol as is yielded by the gallon of ethanol. Ethanol is not readily available at service stations, except in the Midwest. It is less efficient than gasoline so miles per gallon falls by 25 to 30 percent. It has been reported that engines burning ethanol are rough-running. If we diverted our entire corn crops to ethanol production it would displace only about 12 percent of our oil use.

Corn has many uses and few substitutes. Corn is the major ingredient in feeds used to produce meat, milk and eggs. Other grains can be sub-



stituted in small amounts but they have become expensive, too. Corn is the source of cooking oil, sugar for soft drinks, starch and other uses. Ethanol is the only product made from corn which has a reasonably priced substitute-oil. If supplies of corn become short, the ethanol industry will be the first to cut back on corn use. Without subsidies there would probably be no ethanol industry in the U.S.

The years immediately ahead will be uncertain for grain producers but especially for livestock producers as their costs continue to rise. The rise in production costs for livestock producers have only partially been passed on to consumers, but consumers are feeling the price increases in a wide range of foods. Livestock producers are seeing their profits squeezed and will reduce some production which will result in even higher prices at food stores.

What about 2008? The extra acreage used for corn has resulted in fewer soybeans and high prices for soybeans and wheat. In the spring farmers will have to decide which crops they plant. Is the expected corn price of \$4.00 on the December futures contract better than the \$9.50 expected for soybeans? Or did I already divert substantial acreage to wheat last fall when it was selling for \$8.50 per bushel?

Enter the new world of grain economics.