

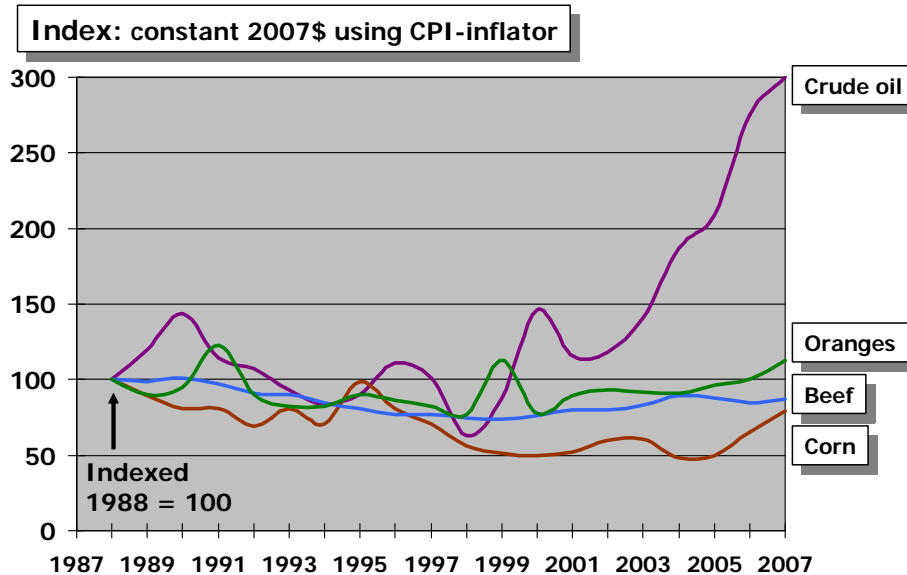
Corn Prices May In Fact Be Too Low?

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Over the past two years, we have seen a major increase in the volume of ethanol utilized in the gasoline market. Such change has been driven by the fact that ethanol is not just an alternative biofuel but is also an excellent oxygenate, providing for enhanced octane and cleaner combustion of blended gasoline. It is expected that this functional value-added use of ethanol will continue and, in 2007, some 7 billions gallons of ethanol will be sold.

Coincidental with the 2006 increase in ethanol volume, produced primarily from corn starch, there was a spike in corn prices that carried into early 2007. The resulting blizzard of articles attacking corn has certainly been noticeable, and has had multi-fold ramifications across the industry: from biofuel investments, to claims around food price inflation, to implied calls for not growing corn in the first place. This situation led us to analyze the questions, “Are corn prices too high, and what impact does corn price have on consumer food prices?”

The nominal price of corn increased in early 2007, and has since decreased again to a level that is projected to average ~\$3.55/bu for the year. Several commentators suggested that the corn price increase, from ~\$2/bu to ~\$4/bu over a relatively short period, resulted in massive inflation in the food chain. Upon initial review we could find no credible evidence for such claims but, nevertheless, generated a data-based analysis of several components to compare the relative price and impact on a real dollar basis. The results are shown in the following chart:



Results in the chart were obtained as follows: Annual nominal prices for the past 20 years were obtained from the U.S. Bureau of Labor Statistics, USDOE, and USDA. Transformation to real dollars (inflation-adjusted constant dollars) was achieved using the Consumer Price Index. The four items under review were then indexed to be equal 20 years ago (1988 = 100). The relative position and trend in each line shows where the price is today and the comparative historical change in real terms (excluding the influence of inflation).

The first striking fact is that the price of corn is lower than it was 20 years ago, and except for the past year, it has been declining in real-terms. Clearly, corn price has not kept up with the

general CPI-level inflation: which begs the question, is the price of corn too low compared to the value for all its possible uses? The second fact is that since about 1999, the real price of oil has increased dramatically and especially relative to corn. We included beef since cattle eat corn, although these days they also eat the protein-rich residue left-over after making ethanol from corn. It seems that real price increase has also been below inflation for beef, albeit higher than corn. Oranges were included in the analysis as a food item that is intuitively completely independent of corn. Real price spikes occur such as in 1999 (probably due to freeze conditions) but generally the relative price change is slightly above CPI-inflation, and is much higher than for corn. Therefore, the results show that, even with the recent corn nominal price increase, the real price is below other foodstuffs, and dramatically below that for crude oil.

The analysis and results do not support the theory that corn price increases have a large impact on food prices. While corn-based ingredients are important as constituents in many foodstuffs and beverages, this does not equate with corn being the major component that has the highest direct price impact. On the contrary, the results here suggest that corn has been short-changed for the past 20 years, especially given the market value for those uses and for the growing need for ethanol oxygenate (for which the only significant commercial bio-sources are sorghum and corn grain, for the foreseeable future). For comparative purposes, the current nominal price for corn that would make it equal to the widely-accepted change in crude oil, over the past 20 years, is \$13.50/bu. Perhaps this might shed some light on the relevance of debating over \$2 or \$4/bu, or even \$6/bu corn, especially when societal values such as a home-grown, safe, and being an effective gasoline oxygenate are involved.

The recent articles claiming corn as the source of price increases are not supported by economic analysis based on real data. The results here do suggest that the large increase in oil price may have more impact on food prices (transport and processing energy) than does corn price (compare the data in the chart). With such a beneficial real price situation, corn is clearly an attractive feedstock with considerable financial benefit to the economy. Given corn is such a fundamental foundation, it may be more fruitful to be supporting research to continue corn improvement, and to help resolve any real issues, than to be critical of corn without providing for any serious alternative commercial solutions.

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