



WEEKLY OUTLOOK



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ANTICIPATING THE SIZE OF THE 2006 CORN CROP

Corn prices have been on a bit of a roller coaster since harvest, but are now at the highest level since late summer 2005. The large carry in the corn futures market results in a relatively high price being offered for the 2006 crop.

March 2005 corn futures traded to just under \$2.26 on February 3, the highest price for that contract since early September 2005. December 2006 futures traded over \$2.60, just about \$.09 below the contract high. The average spot cash bid in central Illinois reached a marketing year high of \$2.075 on February 3, \$.44 above the marketing year low price reached on October 18, 2005. The price strength has been a little surprising given the magnitude of the surplus in U.S. corn inventories. However, over the past 32 years, the central Illinois cash price has never established a marketing year high in February, suggesting that even higher prices might be expected sometime over the next six months.

It is difficult to identify a single factor that has contributed to the run-up in prices over the past two weeks. Fundamentally, the increase in exports and export sales has been a supportive factor. Ideas that ethanol driven demand for corn will continue to increase at a brisk pace and that U.S. corn acreage may decline modestly in 2006 also provide fundamental support. Dry weather has driven wheat prices higher and has raised concerns about the 2006 growing season for corn and other crops. Speculative demand for corn and other crops has also escalated, as evidenced by the daily tally of the net position of the fund traders.

The recent price volatility and uncertainty about the 2006 growing season makes pricing decisions difficult. For new crop pricing, it may be useful to try to discern the size of the 2006 crop that the market is trading at any given time. This is not an exact science, since demand for the 2006 crop is also uncertain to some degree. Furthermore the supply, consumption, and price relationship is not consistent over time. However, it may be a useful exercise to try to answer the question **What size crop is the market trading?**

The starting point is to estimate the 2006-07 marketing year U.S. average farm price implied by current futures prices. The USDA has calculated the difference between the average monthly cash

price received by farmers and the average closing price of nearby futures for each month during the marketing year since 1975. That difference is not consistent over time, but using, say, the average difference of the past 5 years as the forecast for 2006-07 may be a reasonable approach. Using the five year average and closing futures prices on February 3, 2006, the futures market implied a 2006-07 marketing year farm price of \$2.51 per bushel.

The second step is to estimate the supply and consumption balance implied by the average cash price. The relationship between the year-ending stocks-to-use ratio and average marketing year price can be used as a proxy for that estimate. Based on the relationship between the stocks-to-use ratio and price since 1998-99, a price of \$2.51 implies a 2006-07 year ending stocks-to-use ratio of 8.8 percent. In comparison, the current projection of the stocks-to-use ratio for the 2005-06 marketing year is 22.4 percent.

The third step is to determine the crop size implied by a stocks-to-use ratio of 8.8 percent. That requires a forecast of likely consumption in order to calculate the implied crop size. Allowing for a generous increase in both domestic and export use of U.S. corn in the year ahead, total consumption might reach 11.355 billion bushels, 545 million more than expected to be used this year. A stocks-to-use ratio of 8.8 percent, then, means 2006-07 year ending stocks of 1.047 billion bushels, implying a crop of 9.966 billion bushels. That is, the market appears to be trading a 2006 corn crop that is 1.146 billion bushels, or 10.3 percent, smaller than the 2005 crop. That calculation is obviously sensitive to the forecast of use. A smaller forecast of use implies a smaller crop and vice versa.

If the 2006 corn yield is near trend value of 149.5 bushels, a crop of 9.966 billion bushels implies harvested acreage of 66.66 million, 8.45 million less than harvested in 2005. Conversely, if harvested acreage of corn is reduced by 1.5 million in 2006, a crop of 9.966 implies a U.S. average yield of 135.4 bushels per acre.

As the 2006 growing season progresses, decision makers might use the concept outlined here as one piece of information in making pricing decisions. The crop size implied by the futures market can be evaluated against known information about acreage, weather, and crop conditions to make a judgement about whether the current price is over or under valued.

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