

A brief examination of the impact increasing ethanol production will have on crop prices

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One of the most common questions we hear today is, How high could corn prices go if we have any production problems this summer? Put another way, of all the corn buyers, who will blink first if prices were to increase significantly? Budgets showing the impact feed prices have on livestock enterprises costs and returns are fairly common, but what about the ethanol industry? How much can ethanol plants pay for corn and still keep their doors open? To attempt to answer that question, we developed a model for a representative ethanol plant with all the normal assumptions about costs, etc. so as to examine breakeven corn prices under various subsidy and mandate scenarios.

Figure 1 shows the breakeven corn price an ethanol plant could pay to keep the doors open (i.e., cover variable costs) given various crude oil prices and policy scenarios. In our model, crude oil price is the driver. That is, gasoline prices, ethanol prices, and natural gas for drying the distillers' grains are all based on crude oil prices. The "subs&man" line (red) reflects the scenario where the 51¢ per bushel blender credit exists and mandates on ethanol use are in effect. The way mandates were accounted for was to say that ethanol sells for the same price per gallon as gasoline (i.e., people ignore the fact that it has less energy per gallon). Once sufficient plants are built and producing, such that ethanol supply exceeds the demand needed to replace MTBE and mandated levels, then consumers will start buying ethanol as a substitute for gasoline and energy content will matter (i.e., the blue line in Figure 1 will become the relevant breakeven). The bottom line regarding figure 1 is that if subsidies and mandates are in effect, ethanol plants likely can pay more for corn than any livestock producer. If subsidies and mandates are not in effect (i.e., free market scenario), ethanol plants can only pay about \$2/bu when crude oil is at \$60/barrel. In other words, the ethanol industry would probably disappear over night. That simply suggests that the future of this industry is highly political. The green and blue lines reflect the breakeven corn prices for the scenarios where mandates and subsidies are in effect individually (it can be seen that the mandates are more important to the ethanol producers than the 51¢ per gallon subsidy).

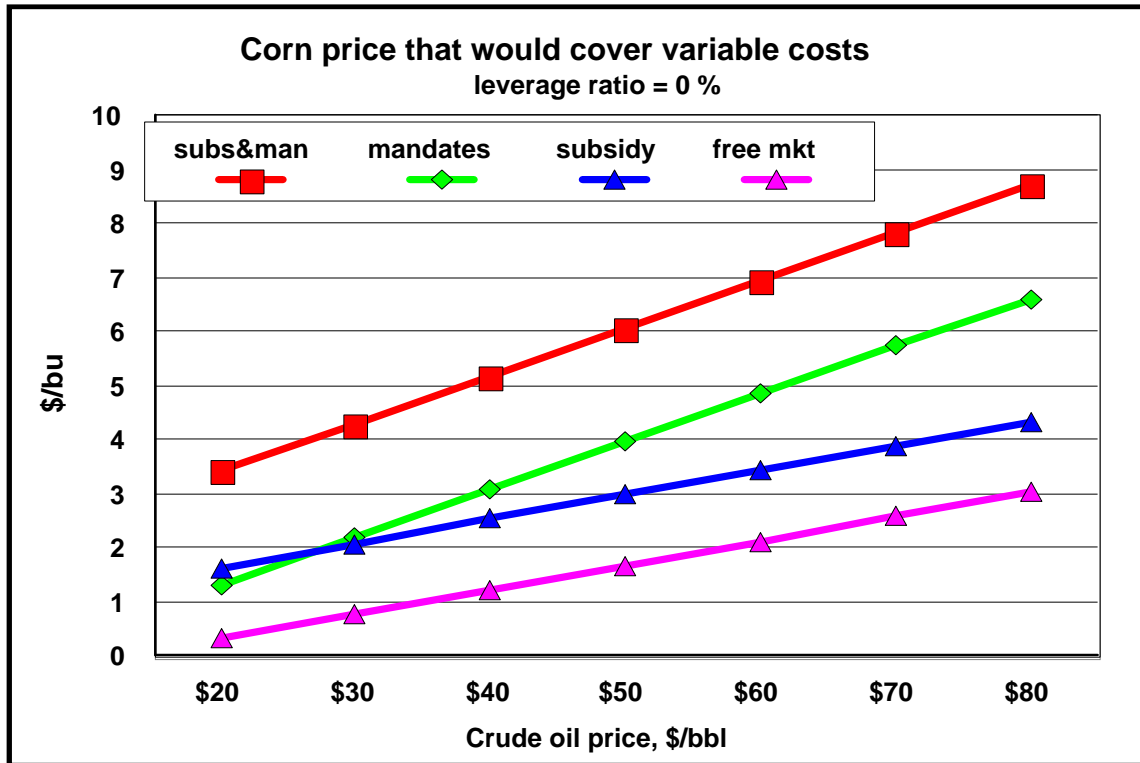


Figure 1.

Figures 2-4 show the average price of harvest time futures contracts for corn, soybeans, and wheat, respectively. It can be seen that, for all three crops, prices into the future are considerably higher than the long-term average. For example, average corn prices for the years 2007-10 are 63% above the long-term average. Likewise, average prices for 2007-09 for soybeans and wheat are 44% and 40% above their long-term averages, respectively. Another aspect these figures reveal is that, at least for now, it appears these high prices are here to stay. In the past when we've had price spikes they tended to be driven by supply shocks (e.g., a drought in the Corn Belt), which typically was remedied within a year or so. However, this time the high prices are in response to a demand shock and thus they probably won't decline anytime too soon (remember that we had the third largest corn crop in history in 2006 and still corn prices are high). Thus, the increased demand for corn due to the ethanol industry is providing strong support for corn prices, but that carries over to other commodities as well.

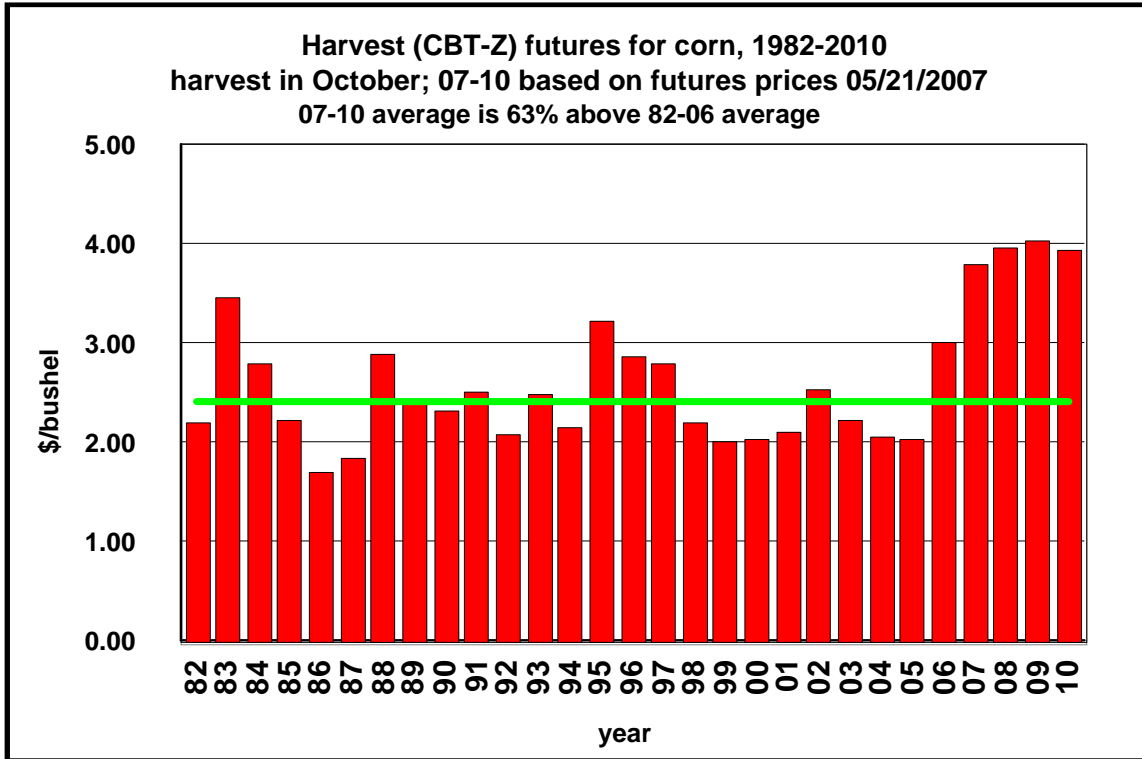


Figure 2

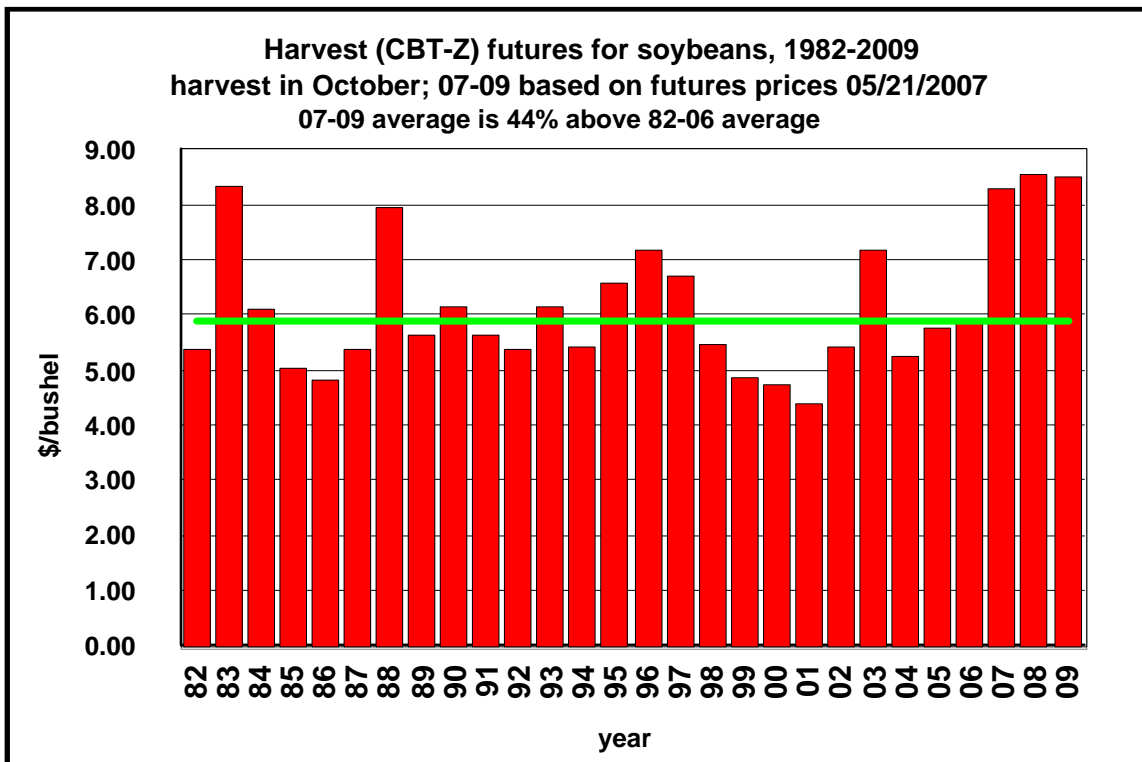


Figure 3

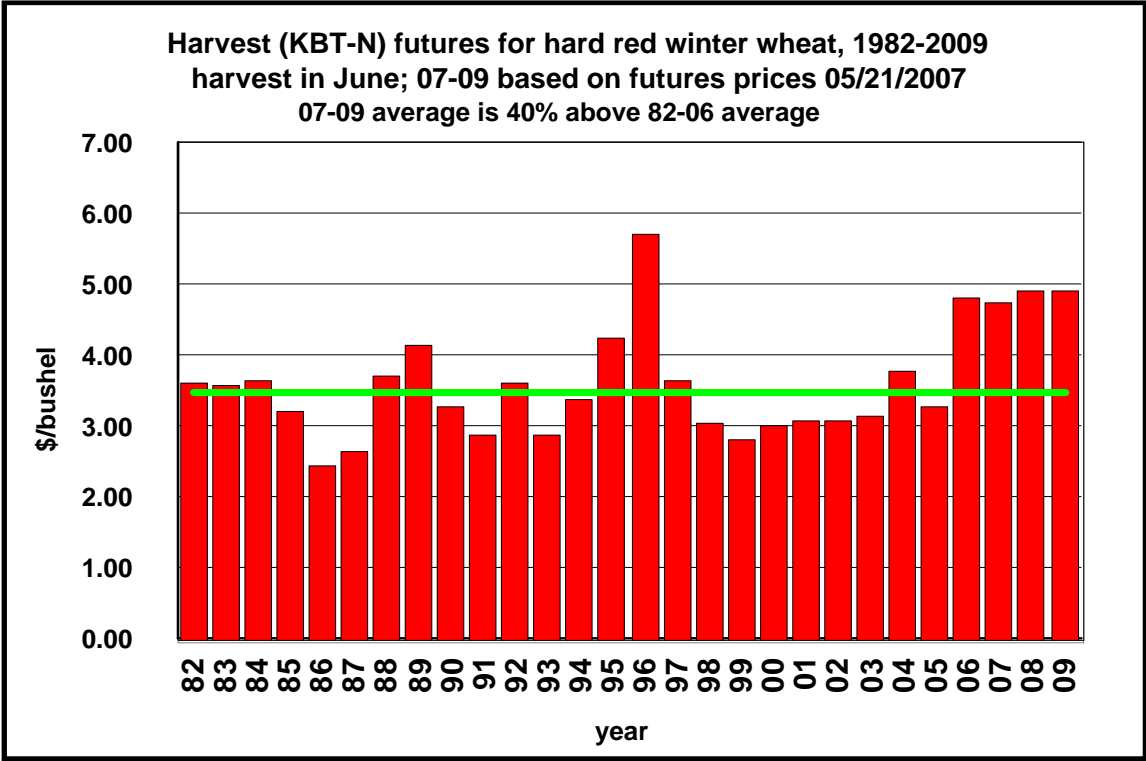


Figure 4