Fertilizer and Fuel Outlook for Fall 2006

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Introduction
On the eve of harvest for 2006, agricultural producers around the country are keeping a close eye on the weather, the cash and futures market, and potential yields. In addition, the continued pressure of diesel and other energy related input costs are causing concern for many with respect to profit margins for 2006.

This fall outlook summarizes energy related costs for 2006 and provides insight into anticipated costs for 2007. For 2006 the agricultural sector is looking at a fourth consecutive year of double-digit percentage increases in diesel costs for harvesting and hauling as well as increases for propane and electricity costs for drying grain.

Fuel Impacts
FAPRI analysis would indicate the prices paid by producers for fuel for 2006 will be more than ten percent above 2005 prices and will be double the level experienced in 2002. Higher fuel costs are impacting many business sectors and agriculture is no exception. In fact, each stage of the production process for agriculture is heavily impacted by increases in fuel prices. Producers were faced with diesel prices for spring planting that were substantially higher than costs experienced in recent history, as depicted in Figure 1.

With farm diesel prices anticipated to hover in the $2.60 to $2.70 per gallon range throughout fall harvest, no immediate relief is evident. Approximately 60 percent of the fuel costs associated with corn production result from fuel used to harvest the crop, which places producers in a tight spot when prices spike or remain high around harvest time. Based on USDA cost of production data, direct fuel costs comprise 14% to 21% of the variable costs of production for most major crops. Livestock producers are also facing increased fuel costs for hauling livestock and other transportation related activities.

Natural Gas and Propane Impacts
Increases in natural gas costs are expected to be felt by producers this fall and into next spring. A milder winter this past year has been offset by a hotter summer, increasing electricity and natural gas demands. 2006 natural gas costs are anticipated to be approximately 10% above costs experienced in 2005. In combination with the past four years this increase results in natural gas prices that are 70% higher than in 2002. Over 80% of the cost of ammonia, and thus most nitrogen fertilizers, is directly related to these natural gas price increases. The current outlook
for natural gas prices for 2007 would indicate a slight decline. Current anhydrous ammonia costs are in the $435 to $450/ton range and are holding relatively steady to slightly lower than last year. The cost of drying grain will also be slightly more expensive for producers this fall as propane prices are running 10 to 20 cents per gallon above 2005.

Costs of Production
Fuel and fertilizer increases are primary contributors to increases in variable costs of production for 2006. However, additional cost increases associated with seed, chemicals, building materials, and machinery are also expected to impact producers throughout the remainder of 2006 and into 2007. For 2007, variable costs are expected to remain constant to slightly lower for most major crops as relief is expected in a majority of the energy related markets.

Table 1 – Expected increases in U.S. variable costs of production for major crops

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Soybeans</th>
<th>Wheat</th>
<th>Cotton</th>
<th>Rice</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>$24/acre</td>
<td>$8/acre</td>
<td>$10/acre</td>
<td>$25/acre</td>
<td>$48/acre</td>
</tr>
<tr>
<td>2006</td>
<td>$18/acre</td>
<td>$7/acre</td>
<td>$7/acre</td>
<td>$18/acre</td>
<td>$30/acre</td>
</tr>
<tr>
<td>2 Yr. Total</td>
<td>$42/acre</td>
<td>$15/acre</td>
<td>$17/acre</td>
<td>$43/acre</td>
<td>$78/acre</td>
</tr>
</tbody>
</table>

Table 1 provides an overview of the expected two-year impact on variable costs per acre of rising input costs. The current outlook for 2007 indicates variable costs should be flat to slightly declining as lower fuel, natural gas, and fertilizer prices are anticipated. This is supported by the short-term August 2006 outlook provided by the Energy Information Administration (EIA) and by futures markets and spot cash markets. However, the volatility of energy related markets will continue to be a concern in the coming months and could alter the outlook for 2007. In addition, the actual costs experienced by individual producers can vary from the U.S. average considerably, offering the opportunity for efficiencies to be gained.

Short-term outlook
The outlook for 2007 is expected to be somewhat more positive for agricultural producers with respect to input costs. Energy related costs are not expected to increase in 2007 and slight declines are anticipated, as supported by EIA. With that said, however, the next five to ten year outlook does not suggest producers will see input prices experienced in 2002 any time in the near future.

Barring price spikes resulting from natural disasters and political unrest in OPEC producing nations, 2007 should be the beginning of a gradual moderation in energy related resources. A continued focus on energy conservation and alternative energy resources should provide additional support to this moderation.

Summary
Four years of consecutive input price increases have been difficult for many agricultural producers and industries to absorb. For some Midwest producers, these increases have also come in conjunction with weather related obstacles. In addition, continued increases in fuel related costs are impacting rural communities and agribusinesses as discretionary spending is decreased as a result of increases in transportation and heating costs and declines in farm profits.
The next year should provide some needed relief as costs begin to alleviate. However it will take some time before the impact of the past four years is fully absorbed and overcome for many in the agricultural sector. Additional insight can be provided by FAPRI and Texas A&M analysis focusing on the costs-price relationships on farms and producers wishing to estimate their own costs can find beneficial tools at www.fapri.missour.edu.

Contact Lori Wilcox at 573-882-9057 or visit FAPRI’s website at www.fapri.missouri.edu for additional information.