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**Fertilizer and Fuel Outlook for Fall 2005**  
**FAPRI-UMC Report #13-05**  
**September 2005**

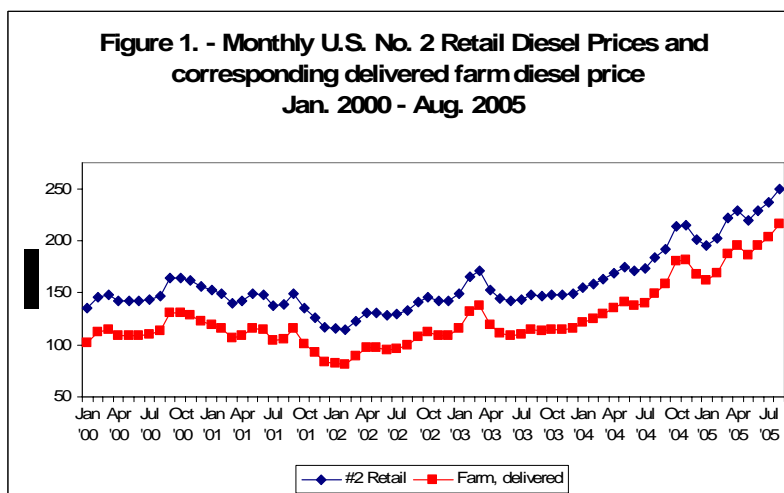
Harvest for the 2005 crop has begun across the United States with many in the industry focusing on yields and harvest prices. As producers begin to review their balance sheets after harvest, many will find the squeeze of not only lower commodity prices, but substantially higher costs.

This fall outlook summarizes costs for 2005 and provides insight into anticipated costs for 2006. The full impacts of hurricane Katrina on the U.S. economy, social structure, and agriculture will not be known for some time. The figures contained in this report do incorporate the September 7, 2005 Short Term Outlook prepared by the Energy Information Administration (EIA) which includes slow, moderate and fast recovery scenarios for energy production.

For Fall 2005, the agricultural sector is looking at significant increases in diesel costs for harvesting and hauling, propane costs for drying grain, and higher fertilizer costs for fall application and higher costs for next spring's planting.

#### *Fuel Impacts*

Costs of production for 2005 are ranging 20% above 2004 for all major crop categories, with a majority of increases in fuel and fuel related components. As Figure 1 highlights, diesel prices have climbed throughout 2005. Prices during the first of September are close to 50% or \$1/gallon above prices for September 2004. This translates into approximately \$5/acre increases in corn costs, \$3.20/acre for soybeans and \$2.75/acre for wheat. Applying USDA's September yield projections for Missouri, this would correlate to increases of 5 cents per bushel for corn and 10 cents per bushel for soybeans just from the cost of fuel, excluding hauling costs. 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 around harvest time.



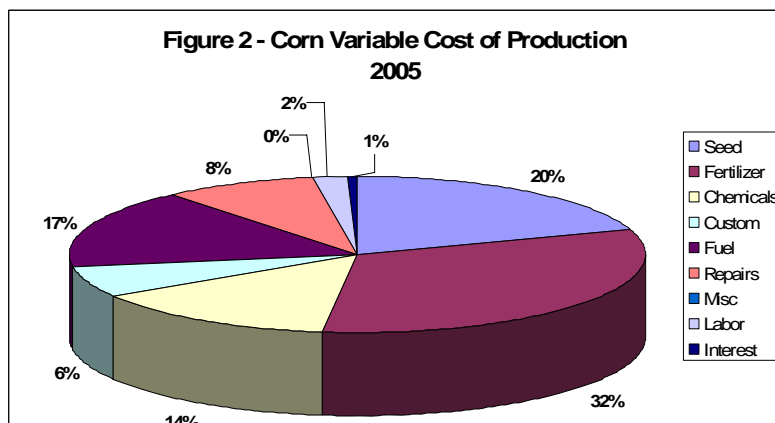
#### *Natural Gas and Propane Impacts*

Increases in natural gas costs are expected to be felt by producers this fall and into next spring. 2005 natural gas costs are running 20% to 25% above 2004, with over 80% of the cost of ammonia, and thus most nitrogen fertilizers, being directly related to these natural gas increases. Current estimates for a ton of anhydrous ammonia are running at least \$50/ton above this spring,

with the prospect of tight supplies this fall and into Spring 2006. The cost of drying grain will also be more expensive for producers this fall as propane prices are running 30 to 40 cents per gallon above 2004.

### *Costs of Production*

Additional cost increases associated with seed and metal are expected to impact producers throughout the remainder of 2005 and into 2006. Metal prices are up about 12% from 2004 with the impact felt in repair, machinery, and farm buildings and bins. Seed costs are expected to be about 5% higher in 2006 than in 2004, while chemical costs are expected to remain somewhat stable.



The final per acre increases expected for 2005 for corn are at least \$14/acre, with over \$12 coming from fuel and fertilizer. As Figure 2 indicates, almost 50% of the costs of producing corn are tied directly or indirectly to fuel/energy related factors (32% fertilizer, 17% fuel products). Corresponding increases for soybean producers, assuming only minimal rust impacts, could be at least \$5/acre, with over half of the increase associated with fuel and fertilizer. Cotton producers may see costs increase as much as \$29/per acre, with a majority of the increase coming from fuel and fertilizer affects.

### *Short-term outlook*

The outlook for 2006 is expected to have residual effects resulting from the infrastructure issues remaining in the energy sector. The EIA does not anticipate the cost for WTI crude oil to average less than \$63 a barrel throughout 2006 and diesel prices are expected to show slight increases in 2006 from average 2005 levels. Natural gas prices are expected to have double-digit increases in 2006 compared to 2005. Therefore, fertilizer prices for 2006 are not expected to show declines from 2005 and the potential for spring price increases and short-term supply issues are possible.

These energy impacts will be determined by the recovery rate seen on the Gulf Coast, the heating and transportation demands experienced over the fall and winter, and supplies on the world market. On a more positive note, the cost increases for electricity are only expected to be in the 2% to 3% range for 2005 and 2006. Additionally, the impacts of Asian Soybean Rust in the United States were much lower than originally anticipated in 2005 and widespread invasion is not anticipated in 2006.

### *Summary*

Potential increases in production costs of at least \$14/acre for corn, \$5/acre for soybeans, and \$29/acre for cotton are expected for 2005, compared to 2004. For these commodities, a large percentage of increases are a result of fuel, fuel related, and fertilizer costs. While the increases in costs in 2006 are expected to be modest when compared to 2005, we will still be looking at double-digit increases in many categories when comparing 2006 costs to 2004. Corn fuel costs for 2006 are expected to be 25% to 30% above 2004 with fertilizer costs following a very similar pattern, resulting in over \$20/acre increases in these two categories from 2004 to 2006. Soybean fertilizer costs for 2006 could be 8% to 10% above 2004 with fuel costs running approximately 20% to 25% higher.

During a time when commodity prices are expected to fall below 2004 levels, these cost increases will be felt throughout the agricultural sector for this year and next. Careful analysis of individual practices, rotations, application rates, and contracting of supply components should prove beneficial when looking for opportunities to curtail costs into next year.

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