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U.S. Farm Sector Weathering Higher Energy Costs

Hurricane Katrina destroyed oil platforms in the Gulf of Mexico and disrupted oil delivery and refining, which caused gasoline and other petroleum product prices to increase sharply. Natural gas production and pipeline distribution were also disrupted.

In the week following Katrina's landfall in late August, the national average retail price of gasoline rose by 18 percent and diesel fuel by 12 percent. As of October 10th, retail gasoline prices remained 9 percent higher and diesel fuel prices were 22 percent above prices before Katrina's gulf landfall. Wholesale prices of nitrogen-based fertilizer (produced using natural gas) were at record levels prior to Katrina. Although post-Katrina Federal data are not yet available, most analysts expect that these prices have risen since.

ERS researchers can provide a perspective on the impacts of such shocks, such as assessing the ramifications for commodity markets, farm income, and food prices. For example, before Katrina, fuel and oil prices had already increased substantially during the year. Higher prices for gasoline and diesel fuel increase farm production costs, which may, in turn, affect farm income. Before Katrina, farm expenses for fuels and oils were projected to reach \$10.2 billion in 2005, up from \$8.2 billion in 2004 and \$6.8 billion in 2003. However, strong sales and other farm sector indicators suggest that farm net income will not be significantly reduced by higher energy costs in 2005.

Looking forward, any rise in farm production expenses in 2006 will depend on the duration of price increases. For every month that the cost of fuels and oils (but not including fertilizer) remains 10 percent higher, farmers incur additional expenses of about \$85 million. Everything else equal, sustained changes in prices for fuel, oil, and natural gas may cause producers to rethink their cropping patterns away from energy- and fertilizer-intensive crops, such as cotton and corn.

Questions also arise about the effects of higher energy costs on retail food prices, which are also forecast by ERS. Because energy and energy-related costs represent a relatively small share of the retail cost of food, higher energy prices are expected to have only a small effect on food prices.

Unforeseen events somehow seem more commonplace than years ago, and the world seems more uncertain. These events provide ERS researchers with the opportunity to re-think their models and how they analyze forces shaping world markets. For example, ERS has recently developed a stochastic modeling framework that allows us to develop more accurate estimates of economic outcomes (such as production and prices) by taking into account random shocks. By better incorporating unforeseen events and putting them in the appropriate economic context, we're in the best possible position to provide policymakers with economic counsel.



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