

## ***Extension Responds: Katrina's aftermath***

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### **How Hurricane Katrina will affect energy and fertilizer costs**

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Despite some progress in putting energy facilities back on line after Hurricanes Katrina and Rita, the impact of these disasters continues to take a toll on the national agricultural economy, because of the strategic location of the Gulf Coast for agricultural shipping and fuel production, processing and transport. Fuel supplies, already tight due to increasing world wide demand, have not been fully restored. Facility repairs will take months. As these facilities come back on line, the pressure on supplies will decrease somewhat, but prices are predicted to stay high relative to last year.

According to the U.S. Department of the Interior (DOI), the Gulf of Mexico supplies 29 percent of domestic oil production and 21 percent of domestic natural gas production. Most production facilities in the Gulf were closed after the hurricanes to protect the environment and human safety. As of November 2005 the DOI reports that 64 percent of oil production and 53 percent of natural gas production in the Gulf was still down. Fifteen production facilities in the Gulf received significant damage from the hurricanes and may need three to six months to complete repairs and come back on line.

Wisconsin agriculture, industry and families rely heavily on natural gas to meet a variety of energy needs. In addition to being a fuel, natural gas is also a feedstock for nitrogen, used to produce ammonia, the building block of all nitrogen fertilizer products. The availability and cost of natural gas profoundly affects the ability of Wisconsin's farmers to compete in today's tight agricultural markets. What can be expected for the 2005-2006 heating and growing season?

The most recent predictions of energy experts in Wisconsin and elsewhere suggest that natural gas prices will continue to rise. While it is difficult to predict how much, due to the influence of unknown factors like weather on demand, the state's largest utility We Energies predicted in September 2005 that prices for natural gas residential heating fuel may increase by 40 percent to 45 percent or more over last heating season, according to the Milwaukee Journal-Sentinel. An increase in natural gas prices could also increase electricity rates, since most new base electrical capacity in Wisconsin is natural gas powered for environmental reasons. The WPS Energy Outlook for October 2005 cites a U.S. Congressional Budget Office report predicting that natural gas prices "may well stay" at record levels throughout the winter.

Federal predictions were even higher. For the Midwest, the U.S. Department of Energy (DOE) Energy Information Administration (EIA) Short Term Outlook,

issued September 7, 2005, predicts natural gas prices may rise between 69 percent and 77 percent and propane prices may rise between 39 percent and 43 percent. These predictions were made after Katrina but before Rita, so the actual situation for this winter may be worse than predicted. Diesel fuel prices just went over \$2.90 per gallon, the highest price ever, both in current price and adjusted for inflation.

The impacts of the natural gas price increases on fertilizer prices could be equally dramatic. The Fertilizer Institute states that natural gas constitutes 70 to 80 percent of the cost of producing ammonia. One ton of ammonia requires an average 33.5 million Btu's (or 335 therms) of natural gas as a feedstock. How these natural gas cost increases will be reflected in fertilizer prices is unclear. Natural gas price increases over the last number of years have caused some fertilizer plants in North America to close and others to cut back production.

If this is a harsh winter, the problem of rising natural gas prices will be exacerbated. Natural gas prices are driven by supply and demand. Unless natural gas usage decreases nationally due to conservation or improved efficiency, a colder than normal winter will increase demand and drive up prices, perhaps dramatically.

## THE REASONS FOR INCREASING NATURAL GAS PRICES

The reason for this rise in natural gas prices is simple. First, Hurricanes Katrina and Rita have affected the production and supply in the United States, driving up the price, at least in the short term. Second, demand continues to grow while the normal supply is stagnant and storage inventories have fallen. According to the DOE EIA, 92 percent of new electrical generating capacity now under construction in the United States is gas fired, with natural gas use for power production expected to continue to grow over the next decade. Natural gas continues to be the preferred alternative for home heating. Since natural gas is relatively clean compared to fuels like coal, and also easy to transport, growth in demand is expected. The current high price of oil on the world market also favors use of natural gas in industrial and commercial facilities.

On the supply side however, production is near maximum levels. The United States gets 99 percent of its natural gas from North America (85 percent from the U.S. and 14 percent from Canada). Greatly expanding natural gas production in North America or importing large quantities of liquefied natural gas (LNG) are years away from being a reality, even if national policy mandated these actions.

## THE BOTTOM LINE

The bottom line for Wisconsin agriculture is probably an increase in natural gas and fertilizer prices this winter. The significance of the increase is unknown but may be large. Improving on farm efficiencies in energy and fertilizer use remains

the best way of reducing the impact of these price increases, which may continue for some time to come.

## INFORMATION AND ASSISTANCE RESOURCES

USDOE Energy Information Administration <http://www.eia.doe.gov/>

Wisconsin Focus U.S. on Energy program <http://www.focusonenergy.com/>

Wisconsin Department of Administration (DOA) Energy Bureau heating fuels price update [http://www.doa.state.wi.us/pagetext\\_detail.asp?linkcatid=461](http://www.doa.state.wi.us/pagetext_detail.asp?linkcatid=461)

DOI Stat U.S. of oil and gas production in the Gulf (11-02-05)  
<http://www.mms.gov/ooc/press/2005/press1102.htm>

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