



Diesel Fuel Prices and Fuel Costs on Illinois Farms

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May 5, 2015

farmdoc daily (5):82

Recommended citation format: Schnitkey, G. "Diesel Fuel Prices and Fuel Costs on Illinois Farms." *farmdoc daily* (5):82, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, May 5, 2015.

Permalink <http://farmdocdaily.illinois.edu/2015/05/diesel-fuel-prices-and-fuel-cost-on-il-farms.html>

Farmer-paid diesel fuel prices averaged \$2.30 per gallon for purchases made in March 2015. The March 2015 prices were 36% lower than the \$3.58 per gallon average during March 2014. In 2014, fuel costs averaged \$24 per acre for corn grown in central Illinois. If a 36% decrease occurs, similar to that for diesel fuel prices, fuel costs would be reduced by \$9 per acre. While helpful, a \$9 per acre decrease only represents a 1.5% decrease in non-land costs.

Diesel Fuel Prices

The Agricultural Marketing Service, an agency of the U.S. Department of Agriculture, reports diesel fuel prices paid by Illinois farmers on a bi-monthly basis in its *Illinois Production Cost Report*. Figure 1 shows a graph of these prices from the beginning of 2010 to April 30, 2015. During early 2010, diesel fuel prices were in the mid \$2 per gallon range. Prices then increased, reaching a plateau of roughly \$3.50 per gallon from March 2011 to November 2014. Prices then decreased from \$3.51 per gallon on November 13, 2014 to \$2.13 per gallon on February 5, 2015. From the \$2.13 low, the price rose to \$2.50 on March 5, 2015 and then declined. Diesel fuel was \$2.34 per gallon on April 30th.

As one would expect, diesel fuel prices closely follow crude oil prices, as is illustrated in Figure 2. Figure 2 shows diesel fuel price as reported in the Illinois Production Cost Report and the spot price of Brent Crude Oil as reported by the *Energy Information Agency*. So as to maintain the same scale, bi-monthly prices were divided by their mean levels from January 2010 to March 2015: \$3.26 per gallon for diesel fuel and \$99.63 per barrel for Brent Crude. As can be seen in Figure 2, diesel and crude oil price are highly correlated. The correlation coefficient between the two series is .93.

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Figure 1. Diesel Fuel Prices on Illinois Farms

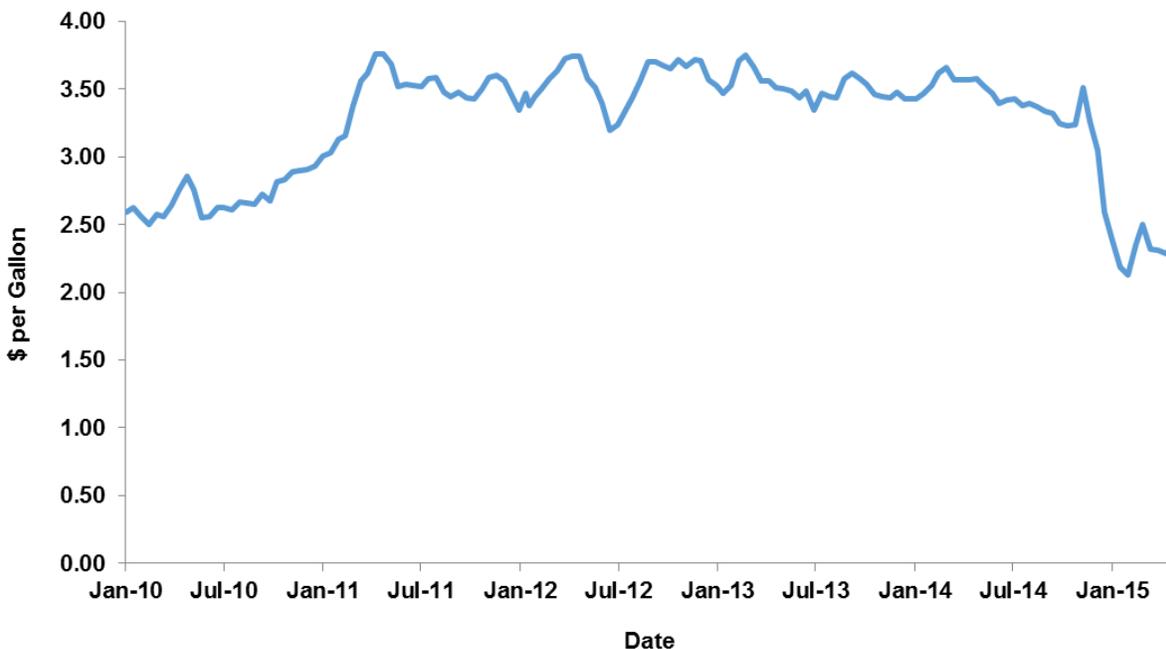
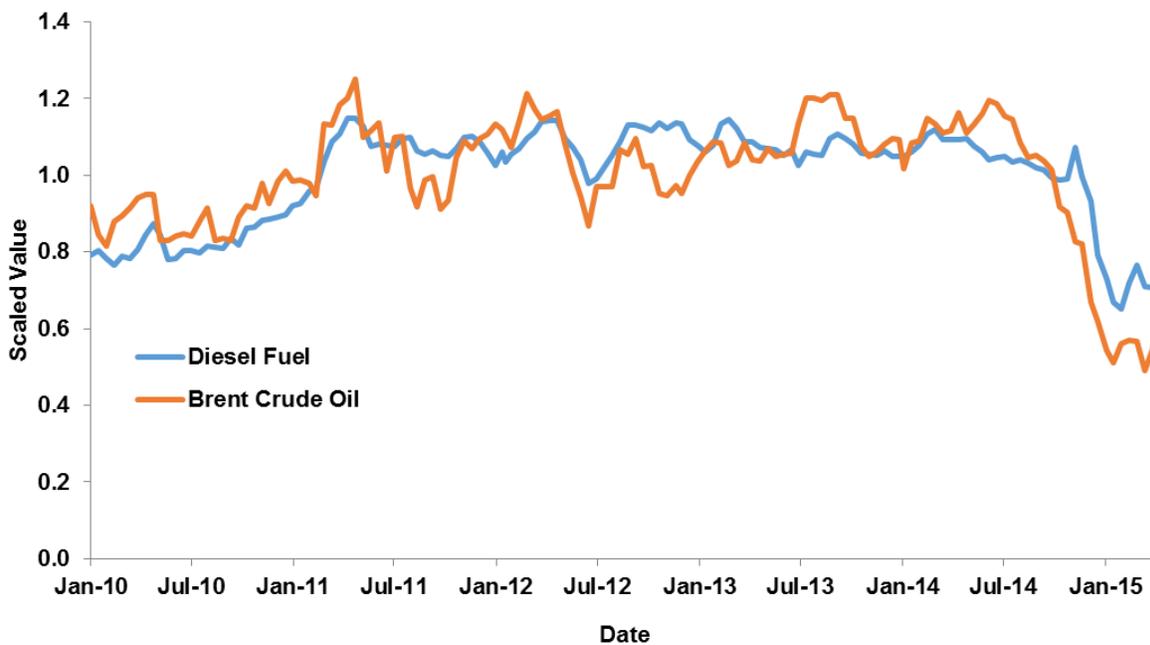


Figure 2. Diesel Fuel and Brent Crude Oil Prices, Divided by Means (Diesel =\$3.26 per gallon, Brent Crude Mean =\$99.63 per barrel)



Impacts on Per Acre Costs

Lower diesel fuel prices will likely lead to lower per acre fuel costs for corn and soybeans in 2015. In 2014, fuel costs were \$24 per acre for corn and \$21 per acre for soybeans (see central Illinois high-productivity budgets at [Revenue and Costs for Corn, Soybeans, Wheat, and Double-Crop Soybeans](#)).

From 2014 levels, diesel fuel prices have decreased 36%. A 36% reduction in fuel costs on corn translated into a \$9 per acre decrease in fuel costs from \$24 per acre in 2014 to \$15 per acre in 2015. Non-land cost in 2015 are projected at \$595 per acre. A \$9 decrease represents a 1.5% decrease in non-land costs. For soybeans, a 36% translates into an \$8 decrease from \$21 per acre in 2014 to \$13 per acre in 2015. An \$8 per acre decrease results in a 2.2% reduction in the \$370 per acre projection for non-land costs. While helpful, these costs reductions are not large relative to total costs of producing corn and soybeans.

In and of themselves, fuel price decreases will not have a substantial impact on costs. However, several other inputs have had close relationships to energy prices. Two inputs with direct relationships are nitrogen fertilizer and drying. Nitrogen fertilizer is made with natural gas, and natural gas prices have fallen. So far, though, nitrogen fertilizer prices have not decreased. Drying costs may be lower in 2015; however, drying costs will also be highly dependent on grain moisture levels at harvest.

Summary

Lower diesel fuel prices will result in lower costs of producing corn and soybeans. However, fuel constitutes a small portion of total costs of producing grain. As a result, diesel fuel price decreases will be in the 1 to 2% or total cost range.

References

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