



Economics

Ag energy: Risk management, energy, and grain issues

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Harvest updates—

Custom harvesting rates affected by higher fuel prices

by William Edwards

Nearly everyone has been impacted by higher fuel prices this year. Custom corn and soybean harvesters are no exception. Their increased costs will likely be factored into custom harvesting rates this fall.

Estimates of diesel fuel consumption of combining corn range from 1.5 to 2.0 gallons per acre. Soybean harvesting takes only about 1.0 to 1.5 gallons per acre. Larger, newer combines will typically use less fuel per acre. The most recent survey of farm custom rates in Iowa was completed by Iowa State University Extension specialists last February, when the price of diesel fuel delivered to the farm was about \$1.60 per gallon. Since then, prices have surged to as much as a dollar per gallon above that level. Fortunately, some operators have been able to purchase or contract fuel at prices lower than those seen in the most recent increases.

If an average price increase of 80 cents per gallon is assumed, and average fuel consumption is assumed to be 1.25 gallons per acre for soybeans and 1.75 gallons per acre for corn, the increased costs per acre for combining would be \$1.00 and \$1.40, respectively. If 15 percent is added to these increases to account for the cost of lubricants, the total increase in costs would be approximately \$1.15 per acre for soybeans and \$1.60 per acre for corn.

Custom operators should record their actual fuel consumption and purchase prices, so they can calculate a fair charge to their customers. Some operators may quote a base rate plus actual fuel costs to be calculated after crops have been harvested. In other cases, persons hiring the work done may provide fuel from their own supplies.

Costs for hauling grain to storage or market also have increased. Distances and fuel consumption rates vary widely, but haulers can estimate their own costs by recording fuel purchases and distances driven.



(Iowa State University)

Harvest fuel costs

by Michael Duffy

Harvest fuel costs are a significant portion of the harvest cost and represent a measurable portion of the overall costs of production. An Iowa State University Extension publication, *Estimated Costs of Crop Production* (FM 1712), estimated that combine variable costs (fuel, oil, and lubricants) represented between 4 and 5 percent of the variable costs of corn production and approximately 6 percent of the variable costs of soybean production.

This year, the cost of fuel will be an even larger part of the variable costs of production for both corn and soybeans. Diesel fuel prices are the highest they have been in the past decade. Figure 1 shows the average monthly retail diesel fuel prices in the Midwest for April and September. Notice that September prices rose by 30 percent from 2003 to 2004 and another 50 percent from 2004 to 2005. Although the increase was less dramatic for April prices, they still increased by almost 35 percent from April 2004 to April 2005.

For the individual farmer, the magnitude of these impacts will depend upon several factors.

Estimated Costs of Crop Production uses an average of a small, medium, large, and very large combine to estimate the average costs for combining. The horsepower and head width are matched so that maximum efficiency for each unit can be achieved.

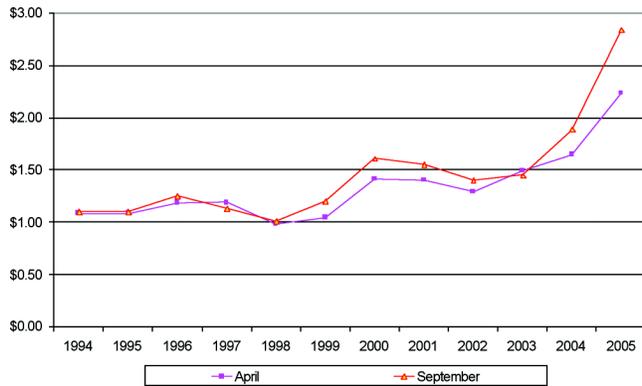


Figure 1. Average retail diesel prices in April and September in the Midwest.

The estimated impact of higher fuel prices on the costs of production was determined by re-estimating the costs with higher diesel prices. For every 50-cent increase in the cost of diesel fuel per gallon, the variable cost for corn combining increased by \$1.13 per acre. For every 50-cent increase in diesel fuel, the variable cost for soybean combining was estimated to increase 85 cents per acre. If diesel fuel is \$1.50 per gallon, the estimated variable combining costs are \$10.42 and \$6.65 per acre for corn and soybeans, respectively. When diesel prices are increased to \$2.50 per acre the variable combining costs increase to \$12.68 and \$8.35 per acre for corn and soybeans.

The average retail price of diesel in the Des Moines area on September 22, 2005, was \$2.639 per gallon. One year ago, on the same date, it was \$1.893 per gallon.

At this time, farmers' options are limited with respect to dealing with the higher fuel costs. On the average, it appears that the increased fuel costs will add approximately \$2 per acre to the costs of combining. In and of itself such an increase does not seem too great. However, this increase is on top of previous increases, and more important, the higher costs will be reflected throughout the entire crop next year. Farmers need to begin to seriously consider the alternatives they have available with respect to saving energy costs.

What to do with all that corn?

by Roger Ginder

As they enter what's expected to be a record soybean harvest and near-record corn harvest, Iowa farmers have several options.

Storage could be a problem; even though Iowa has a lot of elevator storage available, large corn and soybean yields in some parts of the state are likely to create very tight storage conditions.

There are three standard options for farmers to handle the large expected harvest. Farm program-related options also may be worth consideration.

The first option is to store grain temporarily on the farm. The biggest concern is whether you have the ability to maintain quality in temporary storage on the farm. There are numerous ways to handle emergency storage on the farm, but if the grain begins to spoil, the loss may cost you as much as it would cost for short-term storage elsewhere.

Farmers also could sell grain under a credit sale contract. Also known as price-later contracts or no-price-established contracts, credit sale contracts allow the price to be set at a later date. Credit sale contracts are not new and often are used to move grain when storage problems exist; however, I advise farmers to be cautious.

Under a credit sale contract, you turn the title to the grain over to the elevator. You must have confidence in who you're dealing with, especially if the elevator experiences financial difficulties later on. Credit sales contracts are not guaranteed by the Iowa Indemnity Fund.

Farmers should expect some service charges by the elevator issuing the contract to cover costs. If there is no service charge, or a very low service charge at this point in the crop year, the elevator may be assuming additional risk.

Finally, a producer could store grain in an elevator under a warehouse receipt. Fees are generally higher than credit sale contracts, but payments are guaranteed under the Iowa Indemnity Fund. Farmers with warehouse receipts receive 90 percent protection up to \$150,000.

Normally, warehouse receipted grain cannot be stored outside, but a few times in the past elevators have received emergency approval from the Iowa Department of Agriculture and Land Stewardship (IDALS) to store grain under warehouse receipt outdoors.

This emergency measure was taken during the 1994 and 1998 harvests. However, to use this provision, elevators must post a large per bushel surety for every bushel of warehouse receipt grain stored outside. At current corn prices, the per bushel bond required would be much higher than the value of the bushel. And the grain must be off the ground by the end of January. These two factors make it unlikely that a lot of warehouse receipts will be issued on grain stored in outside piles even if the emergency measure is approved by IDALS.

William Edwards, Michael Duffy, and Roger Ginder are professors of economics with responsibilities in agriculture and extension.