

Crop Input Prices for 2009: What Factors are at Work, What Might be Expected, and Should Your Management Change?

by Bruce Erickson

The costs of growing corn, soybeans, and wheat increased dramatically for the 2008 crop. Look for smaller increases for 2009—but relatively more for soybeans and wheat as opposed to corn. That is our preliminary look based on our analysis of market factors and from conversations with a mix of agricultural industry leaders and local dealers.

Last year's bigger increases came in the cost of nitrogen fertilizers and fuels—affecting the cost of putting in a corn crop relatively more than soybeans. Those inputs are not expected to repeat the same magnitude of increase, but other inputs such as phosphate and potash, seed, and some herbicides will cost more, so the costs of putting in a soybean crop is projected to increase more than corn.

Preliminary budgets show variable costs for rotation corn increasing by 35% compared to 40% for soybeans and 42% for wheat (Figure 1).

Fertilizers Prices for nitrogen such as urea, UAN solution, and anhydrous ammonia are up compared to last year, but prices for P and K fertilizers are expected to be up even more (Figure 2). Potash of over \$900 per ton, anhydrous ammonia of over \$1000 per ton, and DAP of over \$1100 per ton are estimates for the 2009 crop based on a variety of sources. The overriding reason for these numbers is that market prices for a wide range of crops are relatively high worldwide, substantially increasing the demand for fertilizers, but at the same time fertilizer industry production and distribution capacity has been unable to keep up with this demand. With most nitrogen used domestically now being imported (mainly due to much cheaper natural gas in other countries) and the growth in Asian and South American fertilizer use, global economic dynamics more and more determine fertilizer prices and supplies. Declines in the market prices for many crops, much lower energy prices following the record highs of mid-summer 2008, and worldwide economic concerns have softened earlier estimates. But while prices for some fertilizer products such as urea have come down

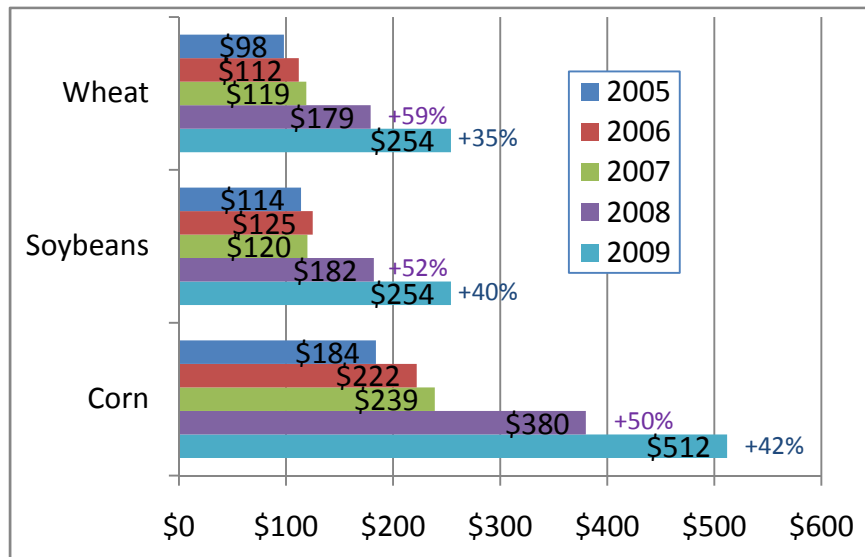


Figure 1. Estimated variable production costs, by year, for average quality Indiana land: 158 bu/A corn after soybeans, 49 beans, 70 wheat.

substantially since summer's highs, other fertilizers such as potash are expected to remain high, and it may take time for the full price movement to occur at the point of sale. Preliminary budgets for Indiana show fertilizer costs of over \$200/A for corn and over \$100/A for soybeans (P and K amounts based on replacement for estimated crop removal).

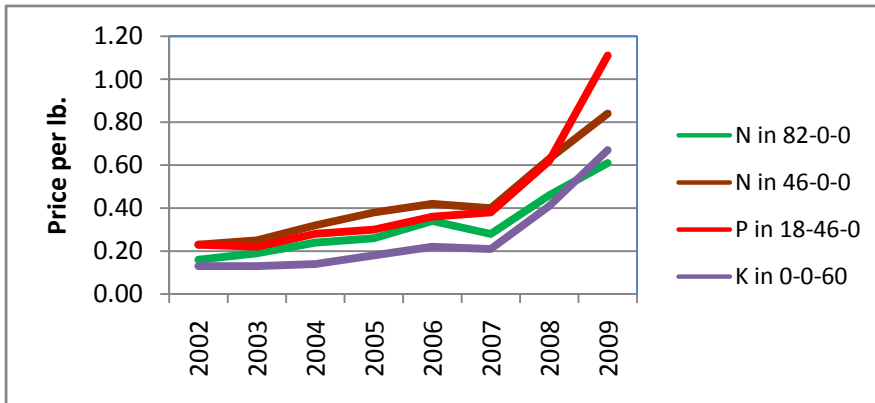


Figure 2. Fertilizer prices used in Purdue Crop Cost & Return Guides. 2009 prices are preliminary and subject to change. Nutrient values for N are on an elemental basis, P and K are on an oxide basis; cost of 18-46-0 has been adjusted for the value of N it contains.

Genetics More performance continues to be delivered through seed in the form of increasing yields and crop protection traits, and the relative value of that fluctuates with the market value of the crop. In addition, seed producers have experienced similar changes in their prices for fuels, fertilizers, and pesticides. List prices for some of the highest-performing, most fully-equipped hybrids have been announced at over the \$300 mark for next year's planting, and some soybeans will be over \$50/unit. Seed companies can adjust those prices to reflect market conditions by adjustments in discount schedules for ordering ahead, pre-paying, quantity savings, or other factors.

Allowing for discounts and correcting for seeding rates, seed budgets for 2009 will be \$80 to \$100 per acre for corn and \$50 to \$70 per acre for soybeans. Biotech traits are increasingly being used and influencing the seed market. While Indiana soybean acres have been dominated by herbicide tolerant varieties for a number of years and are currently planted on over 95% of acres, the seed corn market is now rapidly moving that way (Figure 3). The largest increases have been in hybrids that offer a package of herbicide as well as insect resistance. Expect substantial increases again in the acres planted in these "stacked" traits for 2009.

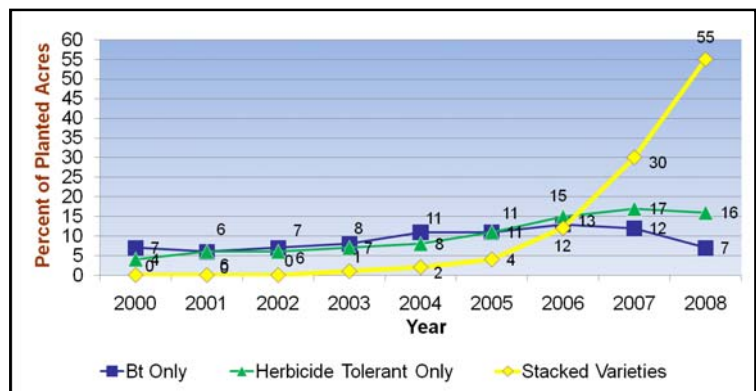


Figure 3. Adoption of genetically engineered seed in Indiana.

Crop Protection Prices for crop protection products have been relatively flat in recent years, but are set for increases for 2009. Glyphosate-based herbicides are expected to be up, but it will be a mixed bag for other pesticides depending on each particular market.

Energy The current slowdown in economic growth is contributing to the recent decline in oil demand and the sharp decline in prices since July. Nonetheless, oil markets are expected to remain relatively tight because of sluggish production growth. The Energy Information Administration predicts diesel prices for

2009 will be similar to 2008 prices. Propane prices are up substantially in the last year, but may come down some by this time next year.

Calculating Returns on Investment The ratio of the price of the input as compared to the market price of the crop being produced is a primary driver in determining input decisions and rates. Using nitrogen fertilizer rates as an example, a price ratio around 1:10 has been common—for example, 20 cent nitrogen and \$2.00/bu corn, or 45 cent nitrogen and \$4.50 corn. If nitrogen is 60 cents and corn is \$6.00 that is still a 1:10 ratio, suggesting similar application rates as before. But 80 cent nitrogen and \$4.00 corn suggests lower optimum application rates, just as 40 cent nitrogen and \$8.00 corn suggests a move to higher rates.

Higher Costs Drive Precision If the cost of technology such as autoguidance systems, sprayer boom control, or variable rate technology has not increased as much as input costs, the potential payback in using these systems increases. The returns in precision technologies have been mostly in saving in input costs and somewhat in increasing crop yields, and both of these factors have risen in value in the last year.

Managing Input Price Risk While there are a number of tools available to farmers to manage production risk through crop insurance and marketing risk through instruments such as contracts, futures, and options, the input side of crop production still leaves crop margins at considerable risk. If there is seasonal variability in prices, strategic timing of purchases can offer some protection. Also, having enough capacity to purchase and store inputs such as fertilizers can allow a farmer as well as an agricultural input business to better take advantage of fluctuating prices.

Summary

Input costs for producing crops increased along with grain prices through summer of 2008. But since summer, grain markets have experienced substantial declines. Fertilizer prices are determined more and more by factors outside of the U.S., and will depend greatly on the nutrient source—while prices for nitrogen have come down since summer, prices for P & K are not likely to come down as much. Prices for seed and chemicals are expected to be higher than last year. There are fewer financial tools available to protect a farmer from fluctuations in input prices compared to grain market prices or production risk, but it always makes sense to assess returns to various inputs, factoring in the cost of the input as compared to the market price of the crop output.