How Lower Feed Grain Prices Affect Meat Prices

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Two recent pieces of legislation indirectly benefit consumers by lowering market prices for many crops, including feed grains. Because feed grains—corn, sorghum, oats, and barley—are a significant expense for meat and poultry producers, lower costs could mean expanded production and eventually, reduced prices at the meat counter. But don't expect prices to fall immediately. Instead, for some meats it may take over a year before prices fall below what they would have been without the reduction in feed grain costs because of the biological lag time between breeding and slaughter.

With changes resulting from the Food Security Act of 1985 and the Gramm-Rudman-Hollings Deficit Reduction Act *(see sidebar box)*, many crop prices have fallen this year. Corn prices, for example, averaged $2.35 a bushel in the 1985/86 crop year (September 1985 through August 1986), but are forecast to average $1.35 to $1.65 a bushel in 1986/87. Feed grain prices, in general, are expected to decline more than a fourth.

Because feed grains account for roughly half the total value of all grains, oilseed meals, and hay used in animal feeding, lower prices for feed grains can substantially improve the profitability of meat production. As net returns for meat producers improve, there is an economic incentive to increase production. However, in the short run, meat output could decline because to raise future production, breeding inventories must be increased. Older animals that might have been slaughtered may be retained as breeding stock longer. Younger animals that might have been fattened for slaughter could be kept for breeding.

Biological constraints determine the duration of this short-term impact. Cattle producers, for example, face the longest adjustment period, with 30 months from breeding to slaughter *(figure 1)*. Breeding to slaughter takes 9 months for hogs, 5-1/2 months for turkeys, and just 2-1/2 months for broilers.

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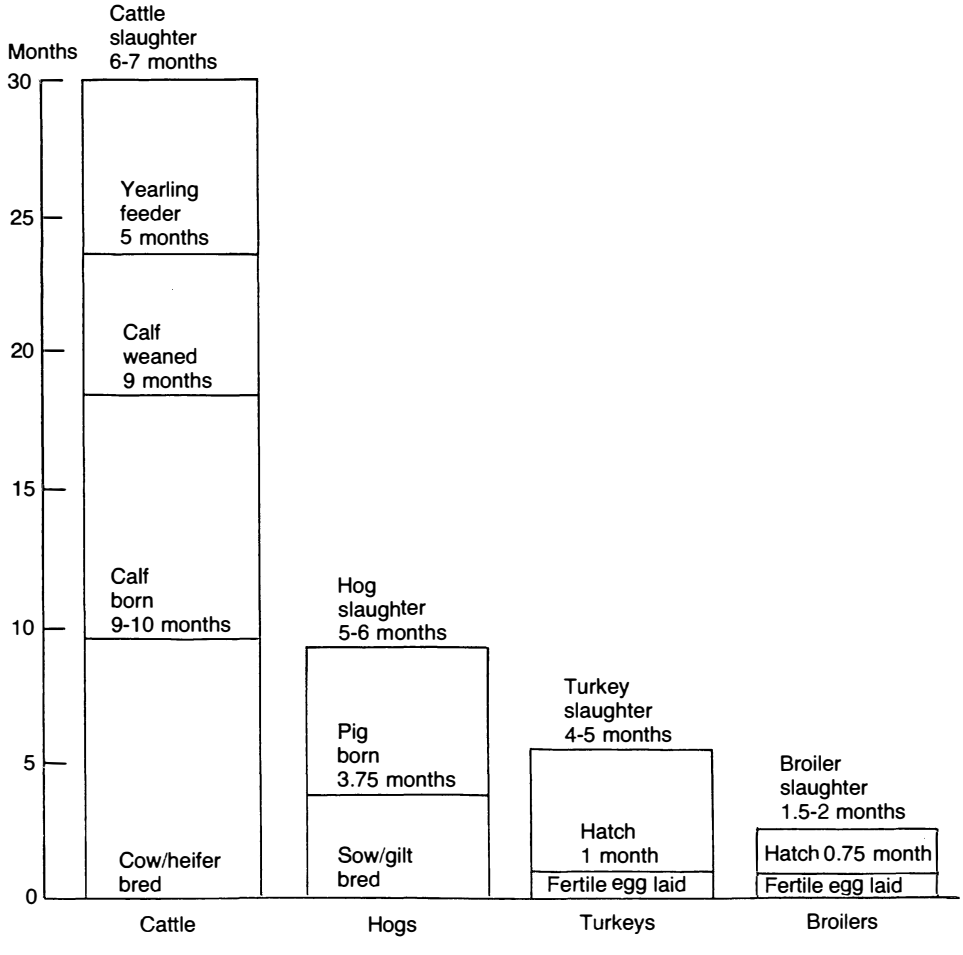
Determining the Effects of Lower Feed Grain Prices

To assess the implications of lower feed grain costs on meat production and prices, ERS researchers used an econometric model to simulate the effects of a 25-percent reduction in feed grain prices. They compared estimated changes in beef, pork, and poultry production and prices with the levels expected without the lower feed grain costs.

Looking first at meat production, the researchers found that cattle slaughter could be down for more than a year because more animals would be held back for breeding *(figure 2)*. Also, some animals that would have been grass fed and slaughtered within

Figure 1. Biological Production Lags for Different Meats



the first year would instead be grain fed and slaughtered later at heavier weights.

In 1988, however, beef production could be larger. The increase would initially be from the slaughter of additional animals that were grain fed and marketed later at heavier weights, rather than being grass fed. By 1989, further increases in beef output would reflect marketings of additional slaughter animals produced from the larger breeding herd.

Initially, pork production would also be lower than without the decline in feed costs, because slaughter would be reduced to expand breeding herds *(figure 3)*. However, because the biological production lag is shorter for hogs than for cattle, output would begin to increase within 9 to 10 months. The resulting pork production increases, coupled with larger supplies of competing beef and poultry, would lead to lower hog prices and a drop in producers' net returns in 1988. This would trigger a second round of hog sector adjustments, resulting in somewhat reduced pork production in late 1989 and early 1990.

The short biological constraints of broilers and turkeys allow faster responses to changing market conditions *(figure 4)*. Therefore, poultry production can increase as early as 3 to 6 months, before the full effects of cattle and hog adjustments are realized. Then, starting in the second year, higher red meat production would lead to lower prices for all meats, narrowing increases in poultry production.

Greater Production and Lower Meat Prices

With reduced prices for feed grains eventually leading to larger meat production, in the long run consumer prices for all meats could be 3 to 5 percent lower than they would have been without a 25-percent decline in feed prices. However, because of

Figure 2. Beef: Higher Production, Lower Prices Could Start in 1988

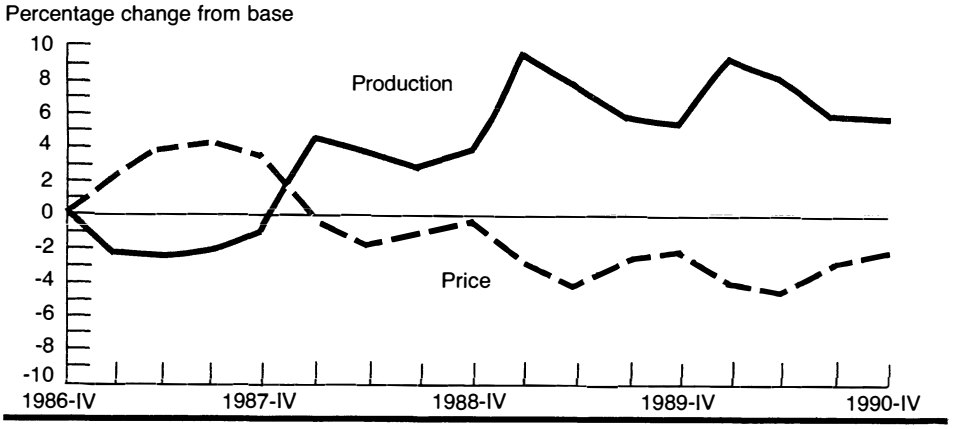


Figure 3. Pork: Higher Production, Lower Prices May Begin Later This Year

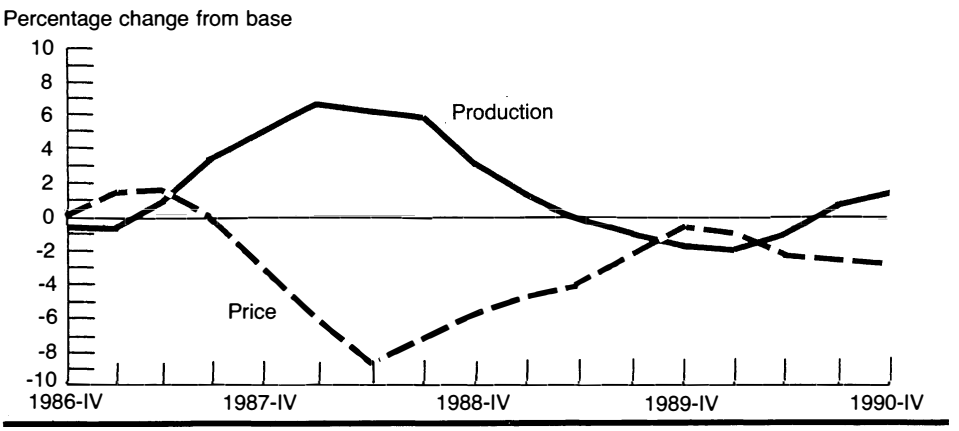
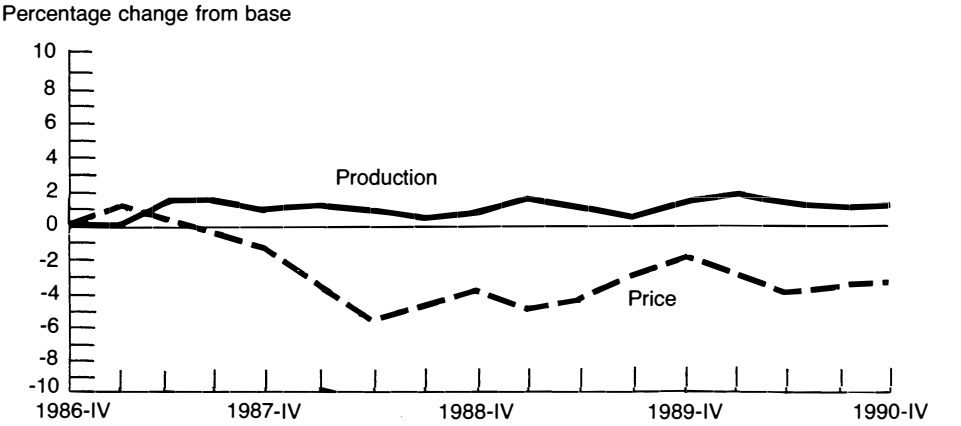


Figure 4. Poultry: Prices Influenced by Total Meat Supplies



Recent Legislation Affecting Agriculture

The Food Security Act of 1985 (P.L. 99-198) provides a 5-year framework for the Secretary of Agriculture to administer various agriculture and food programs. The legislation was drafted with the goal of achieving greater market orientation in the agricultural sector; that is, prices that more closely reflect world supply and demand conditions.

One of the most significant changes in the Act is the provision that allows sharply lower loan rates for grains and several other crops. The loan rates are part of a program in which farmers pledge their output as collateral and borrow from USDA's Commodity Credit Corporation (CCC) at a fixed rate per unit of commodity—the "loan rate." Farmers can opt to repay the loan within a specified period or default and surrender the collateral commodity to the CCC. Because the loan program is designed to support prices, farmers typically default when the market price is below the loan rate. Therefore, the loan rate acts as a price "floor" for farmers who participate in the Government commodity programs.

The Gramm-Rudman-Hollings Deficit Reduction Act lowered effective loan rates for 1986 crops and may do so in the future, although not for 1987 crops. The Act, passed in 1985, was designed to reduce the Federal budget deficit. If Congress and the President cannot enact a budget within specified deficit levels, Congress may vote for automatic spending cuts. When this occurs, spending for Federal programs is reduced proportionately to meet targeted deficit levels. Defense and nondefense programs are treated separately, and some programs are exempt from cuts while others are subject to reduction limitations.

Gramm-Rudman-Hollings budget cuts for 1986 reduced spending by 4.3 percent for all nondefense, nonexempt, not reduction-limited Federal programs, including payments going to farmers under the 1986 CCC commodity loan program. No Gramm-Rudman-Hollings reductions will be made for 1987 crop loan programs, because the current Federal budget met the 1987 targeted deficit level.

increased breeding herd retention, retail prices for beef and pork would be higher in the short term.

Beef prices would be higher than without the reduced feed costs for more than a year and pork prices for about three-fourths of a year before overall increased meat production begins to push prices down from what they would have been.

Higher prices for beef and pork in the short run will mean greater demand and initially higher prices for poultry. Poultry prices will be higher than they would have been for about three-quarters of a year, declining as the total output of poultry and red meat increases. □

References

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Recent legislation that has reduced feed grain costs will indirectly benefit consumers by lowering meat prices.