

Impacts of Recent Commodity Price Fluctuations on Farms in California and a Historical Perspective on Prospects for the Future

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As low-income consumers have suffered from high commodity prices, farmers have gained. Farm incomes were high in 2007 and are likely to be equally high in 2008. But high prices usually do not last. The extreme price spikes that occurred in the spring and summer of 2008 have dramatically fallen. We can learn from considering the past 150 years of price history and especially the episode of the 1970s.

Price increases from 2005 through 2008 have affected consumers and producers in California, the United States, and the world. Other articles have reviewed recent history and considered why prices increased and then declined precipitously in the fall of 2008. Higher commodity prices raised broad international concern because the world's poor spend most of disposable income on food and rely on basic commodities for much of their diet. But, of course, what harms buyers benefits sellers and field crop farmers in the United States have gained from higher commodity prices. Here we examine how farm revenue and expenses have performed in recent years as prices of many items have risen.

U.S. gross farm income is on track to nearly \$380 billion in 2008, up from less than \$300 billion on average from 2004 through 2006 (Table 1). The major increases have been in crop receipts, especially for feed crops, oilseeds, and food grains. Receipts for fruits, vegetables, and nuts have risen relatively little. Production expenses rose steadily from 2004 through 2007 and will have jumped by about \$40 billion from 2007 to 2008. So net incomes were low in 2006 and only slightly exceeded the 2004 level of about \$86 billion in

2007, as gross income gains finally caught up with growth in expenses. The forecast for 2008 is for gross income to grow by more than expenses so net income will roughly equal the 2004 and 2007 figures (Table 1).

Higher prices caused net farm income in California to rise sharply from 2006 to 2007, as costs were relatively stable and value of production rose by about \$4.5 billion. Net farm income in California rose by about 38 percent, to \$12.7 billion, in 2007. Both receipts and costs will be up substantially in 2008, but net incomes are expected to rise slightly when the final data are available.

Higher expected crop incomes are reflected in higher cropland values in California. Farmland values rose from an average of about \$6,000 per acre in January 2004 to about \$10,000 per acre in January 2008. The biggest jump in farmland values was from 2004 to 2007, with only a slight rise in the 2008 figures. This suggests that farmland buyers discounted the long-run sustainability of farm receipts growing substantially faster than expenses.

When crop prices rise, costs for livestock producers rise. In 2007, livestock prices rose as much or more than feed prices and profits from dairy, egg, and other parts of animal agriculture rose. Most important in California, the dairy industry received substantially higher prices in 2007 and 2008 than in 2006. The U.S. Department of Agriculture

(USDA) and futures prices indicate that over the next year feed prices are likely to remain about the same as in 2007 while milk prices will decline—putting added pressure on the profits of this major California industry.

The Recent Price Increases in a Historical Perspective

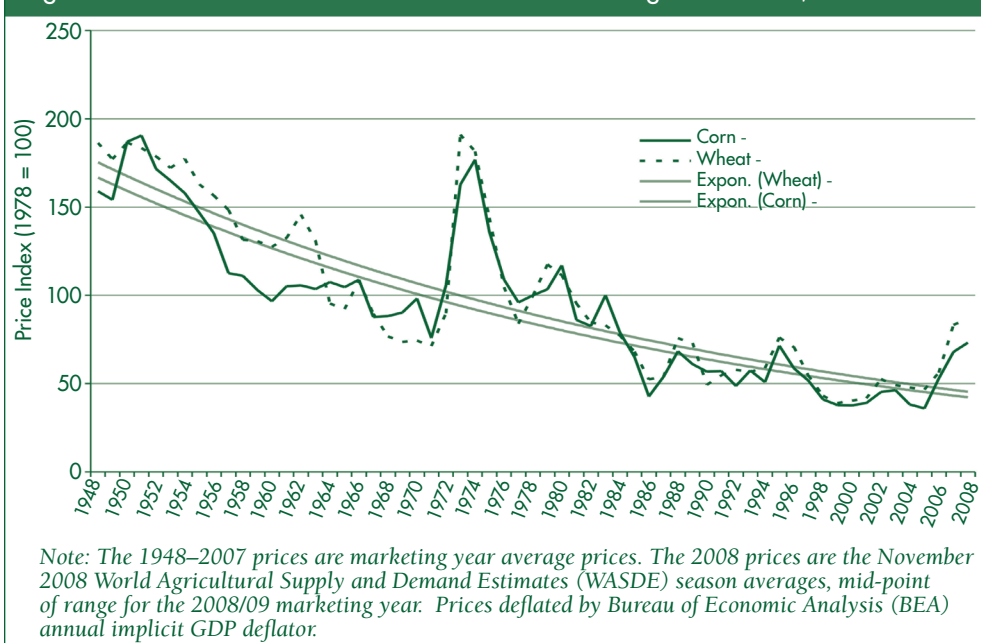
In considering the future pattern of commodity prices, it is useful to put the current period in some historical perspective. Figure 1 displays the pattern of deflated corn and wheat prices since 1948, along with exponential trend lines that show the 2.3 percentage rate of decline of prices over the six-decade period. Real prices jumped dramatically in 1973 and 1974 and then declined over the next few years so that, given rapid inflation in the general economy, real prices were back to the pre-surge range by 1977. However, it took a decade for real grain prices to get back to their long-term trend. Also note from Figure 1 that the three-year period 2006–2008 represents one of only a handful of periods when prices for either corn or wheat have been above the post-war trend. Evidence from a 140-year history promotes the notion that prices that have jumped up soon fall again. The handful of extreme spikes in commodity prices—in the late 1890s (only for corn), around World War I, around the New Deal and the 1934 drought, around World War II, and in the 1970s—were all followed

Table 1. U.S. Farm Income, 2004–2008*

	2004	2005	2006	2007	2008*
	— \$ billions —				
Gross Farm Income	295.6	301.1	292.4	341.1	379.4
Production Expenses	209.8	221.8	233.9	254.4	292.5
Net Farm Income	85.8	79.3	58.5	86.8	86.9

*Source: U.S. Department of Agriculture. * Denotes forecast*

Figure 1. Index of Real Corn and Wheat Prices and Long-Term Trends, 1948–2008



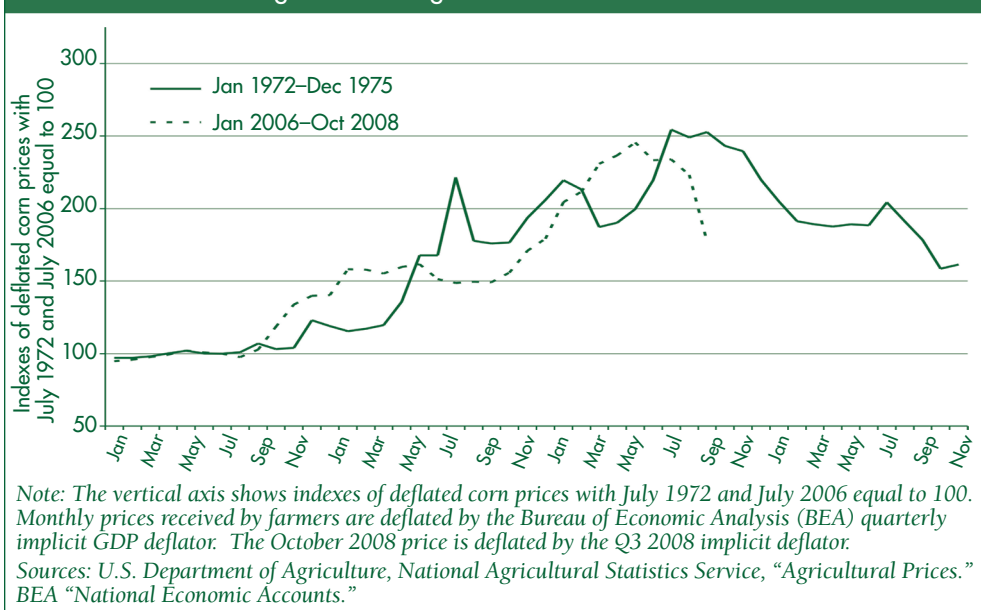
by extreme price downturns. The price drop observed at the end of 2008 seems to be consistent with this pattern.

The 1970s was the most recent previous period of dramatic increases (and subsequent declines) in farm prices, and it may be fruitful to explore similarities between that period and 2006 through 2008. Figure 2 shows the real corn price index by month from January 1972 to December 1975 with July 1972 set at 100 and the real corn price index for January 2006 through October 2008 with July

2006 set at 100. A graph for wheat would tell a similar story, but is not displayed to avoid clutter in the figure.

Starting in the summer of the first year in each period, the corn price rose more rapidly in 2006 than in 1972, reaching about 50 percent more than the base price in just six months (January 2007), where it remained for most of 2007. The corn price then rose over the next eight months to reach 2.5 times the base price by the summer of 2008, before collapsing back to about 1.8 times the base price in

Figure 2. A Comparison of Corn Prices During 1972 Through 1975 with Corn Prices During 2006 Through October 2008



October 2008. In the 1970s, corn prices rose gradually to only about 20 percent above the base through April of 1973 before rising by 90 percent by August 1973. Prices moved erratically before peaking at more than 2.5 times the base price in the fall of 1974. Prices then declined in stages reaching about 1.5 times the base price by the end of 1975. As shown in Figure 1, prices were back to 1972 levels by 1977.

In the 1970s, Lester Brown was among the more prominent observers who projected that the price jumps presaged a long-term food crisis caused by permanently high prices. Several economists, however, (perhaps best represented by D. Gale Johnson) provided calmer (and ultimately more correct) assessments, suggesting that commodity prices would be back on trend within a few years.

Policy-created mandates for ethanol use together with stiff import tariffs on ethanol suggest that corn prices may remain high in the next few years even if oil prices do not rise again soon. It may take relatively high corn prices to sufficiently stimulate production to supply about five billion bushels of corn for ethanol. After a few years, however, national and international substitutes for corn for livestock feed will moderate the ethanol effect even if the mandate and tariff policies remain.

Each period of history is different and no one can be sure where commodity prices will be a few years from now. However, recognition that relatively short-term price spikes have occurred many times in the past does suggest caution in predicting an unprecedented reversal of long-term price trends this time. A bit of history helps buyers and farmers place recent events in perspective.

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