USDA Expense Category Items

Gregory Ibendahl *(ibendahl@ksu.edu)*

Kansas State University Department of Agricultural Economics - February 2017

http://www.agmanager.info

Background

Every month the National Agricultural Statistics Service (NASS) reports prices received and paid by farmers. NASS reports some of these by actual dollar amounts but most are reported by an index relative to some base year. These reported indexes make it easy to see how prices have changed over time.

As defined by NASS, prices paid represent the average cost of inputs purchased by farmers. NASS uses a survey of 8,500 producers to obtain the reported prices (response rate is 75-80 percent). The responses are aggregated by regional and national levels using appropriate weights. All the current price indexes are now being reported with a baseline of 2011. That means that in 2011, each expense price category has an index of 100. Before January of 2014, the baseline was the period 1990-92.

This study examines the broad expense categories of fertilizer, seed, machinery, fuel, labor, and all items used for production to see how these expense items have changed since 1975 and since 2006. To create these revised baselines, the current indexes are normalized so that the new baseline start is either 1975 or 2006. That is, these revised indexes shown here start with an index of 100 for either 1975 or for 2006.

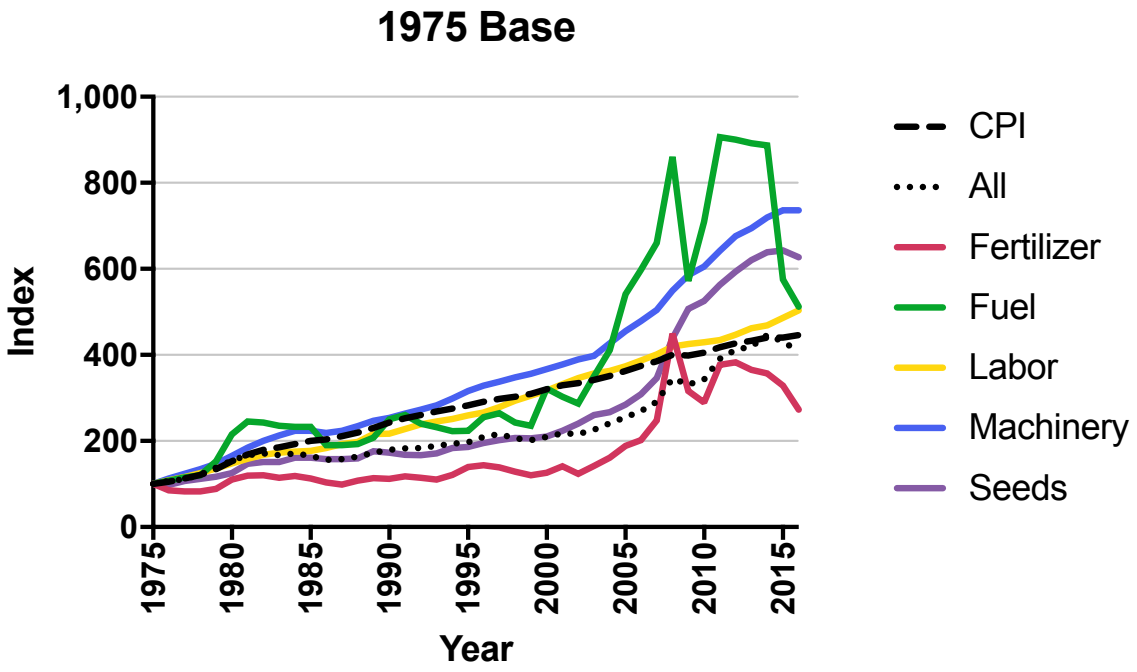

Figure 1. Index of Prices for Selected Inputs Since 1975

Results

Figures 1 and 2 show the price indexes for fertilizer, fuel, labor, machinery, seeds, plus the total input price aggregation. Figure 1 starts with a baseline of 1975 where each category starts at 100. Figure 2 starts with a baseline of 2006. In both of these figures, the CPI index is shown as well. The CPI index is used to represent inflation so input categories that are above the CPI index line indicate that an input category has increased in price faster than inflation (starting from the initial baseline).

Discussion

As shown in Figure 1, many of the expense categories increased at the inflation rate or lower from 1975 until around 2000. During this 1975 to 2000 timeframe, only machinery increased slightly faster than inflation. After 2000, fuel in particular experienced some big price increases before falling steeply in 2014. Fertilizer prices also spiked during the run up in fuel prices but have declined with fuel prices as well. Both machinery and seed costs have seen big price increases starting in the early 2000's and have not declined like fertilizer and fuel. Based on the entire 40 price history shown in Figure 1, machinery and seeds have seen the biggest price increases.

Figure 2 uses the same data but moves the baseline to 2006. This year is important because it was at the start of the period where grain prices rose substantially. During this 10-year period, seed prices have risen the most and have basically doubled over the last 10 years. Machinery prices have risen as well but much of machinery increase started before 2006.

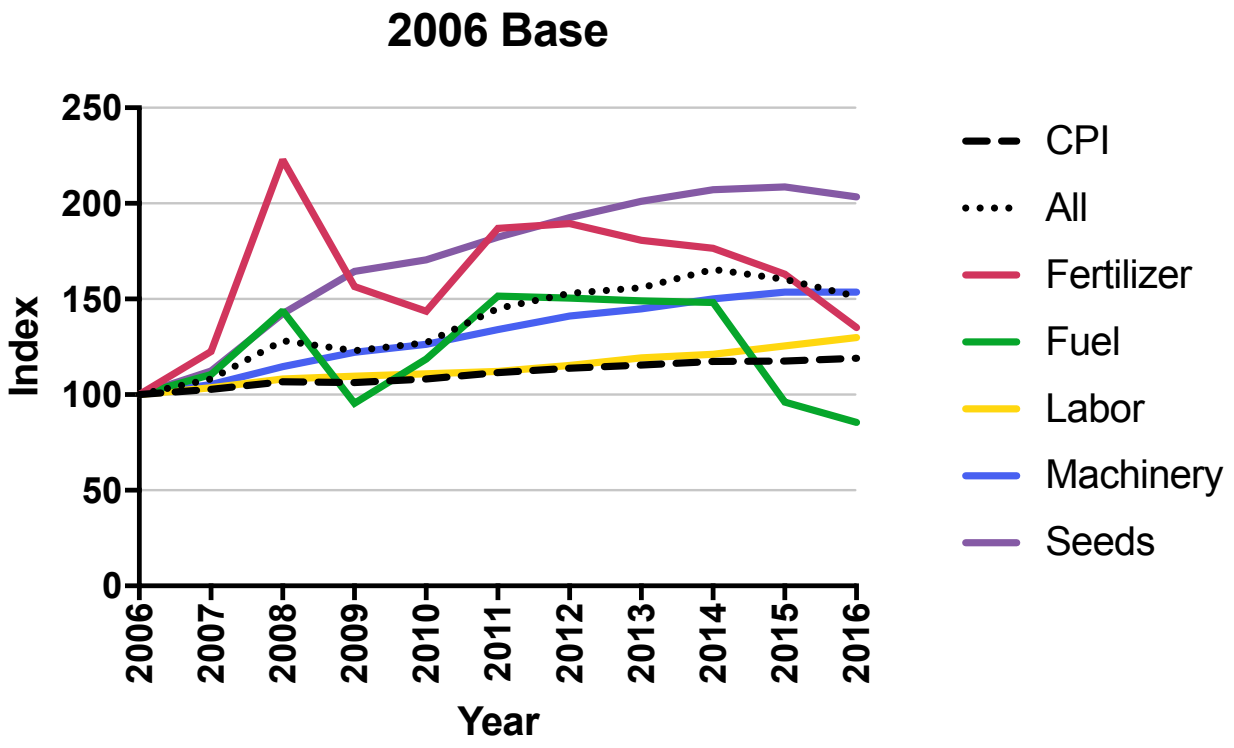

Figure 2. Index of Prices for Selected Inputs Since 2006

The current financial situation of agriculture where margins are very tight will require farmers to really monitor their input costs if they want to have any chance of being profitable. Given the large increase in seed costs and the ability to adjust plant populations, producers should analyze their seed use closely. In some cases, lowering plant populations could help increase profitability.