

Corn Prices are Plunging...

So, What About Retail Food Prices?

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When prices for corn and other grains were on the rise in 2008 and again in 2010 and 2012, meat processors and grocery manufacturers threatened that higher grain costs would be quickly passed on to consumers in the form of higher retail food prices. Cynically, they blamed the Renewable Fuel Standard (RFS) and expansion of the ethanol industry for higher grain prices, while turning a blind eye to the dozens of other factors that drive agriculture commodity markets.

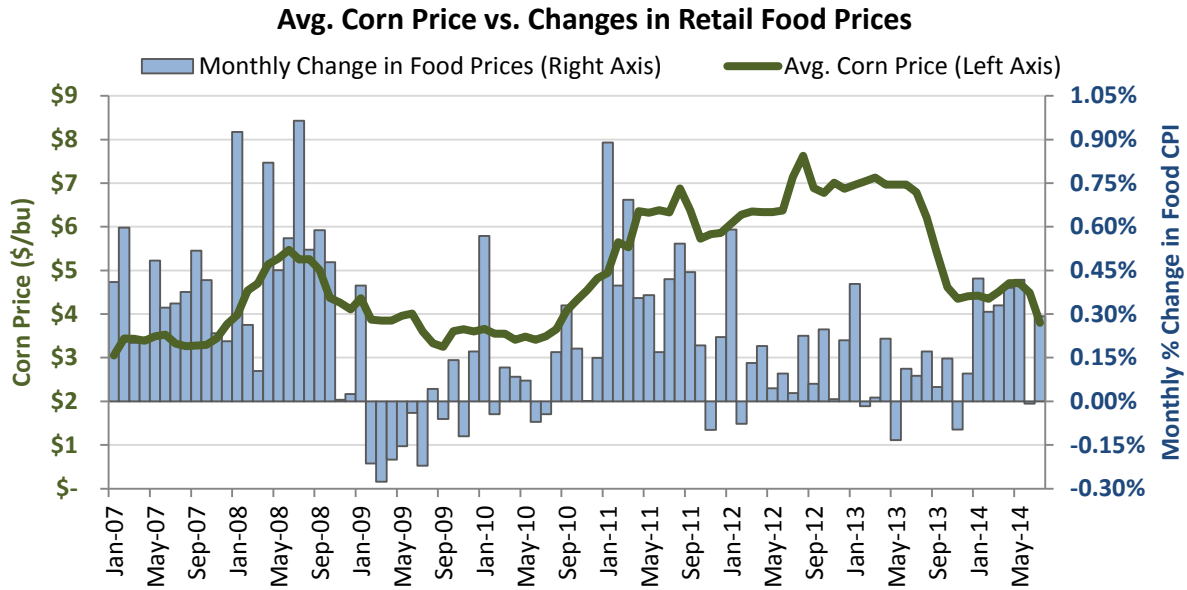
In 2009, the American Meat Institute (AMI) even went so far as to [threaten](#) that food price inflation would rise at *three times the normal rate because of the RFS*, stating “U.S. food prices are projected to rise, on average, by 9 percent annually between 2008 and 2012 unless mandates are addressed...” For the record, **AMI couldn't have been more wrong**. Actual food inflation rates were: 5.5% in 2008 (the year of \$140 oil and the “commodity bubble”), 1.8% in 2009, 0.8% in 2010, 3.7% in 2011, and 2.6% in 2012. Thus, the **annual average was 2.88%**...right in line with the long-term historical trend of 3%.

So, what are AMI and the rest of the “food vs. fuel” crowd saying now? After all, **grain prices have completely collapsed over the past two years**. After peaking at a monthly average price of \$7.63 per bushel during the height of the drought in August 2012, corn prices have fallen **by half** to an average of just [\\$3.80 per bushel](#) in July 2014. So, why isn't Big Food promising to pass these lower grain costs on to consumers in the form of lower food prices—just as they threatened to immediately pass along higher costs when corn prices were rising? Why are prices for some corn-dependent retail food items still rising quickly when corn prices have been falling for two years?

In truth, fluctuations in corn prices do not significantly affect consumer food prices. This is true even for food items for which corn is a major input, like cereals, snack foods, meat, milk, and eggs. In fact, Consumer Price Index data show there is virtually no correlation at all between monthly average corn prices and retail food price changes since 2007 (the coefficient is just 0.03).¹ According to [Citibank's Sterling Smith](#), “Corn prices may have come down 50% (from their highs), but that doesn't mean a box of corn flakes will fall 50% in price. **Much of the price of food comes from the processing and movement of food...**” University of Tennessee [economist Aaron Smith](#) agrees, saying, “You're not going to see a major impact at the consumer level (from the drop in grain prices) at this time.” Indeed, [USDA reports](#) that only 12-17¢ of every \$1 spent on retail food pays for the farm ingredients/products. The other 83-88¢ pays for labor, packaging, transportation, and other supply chain costs.

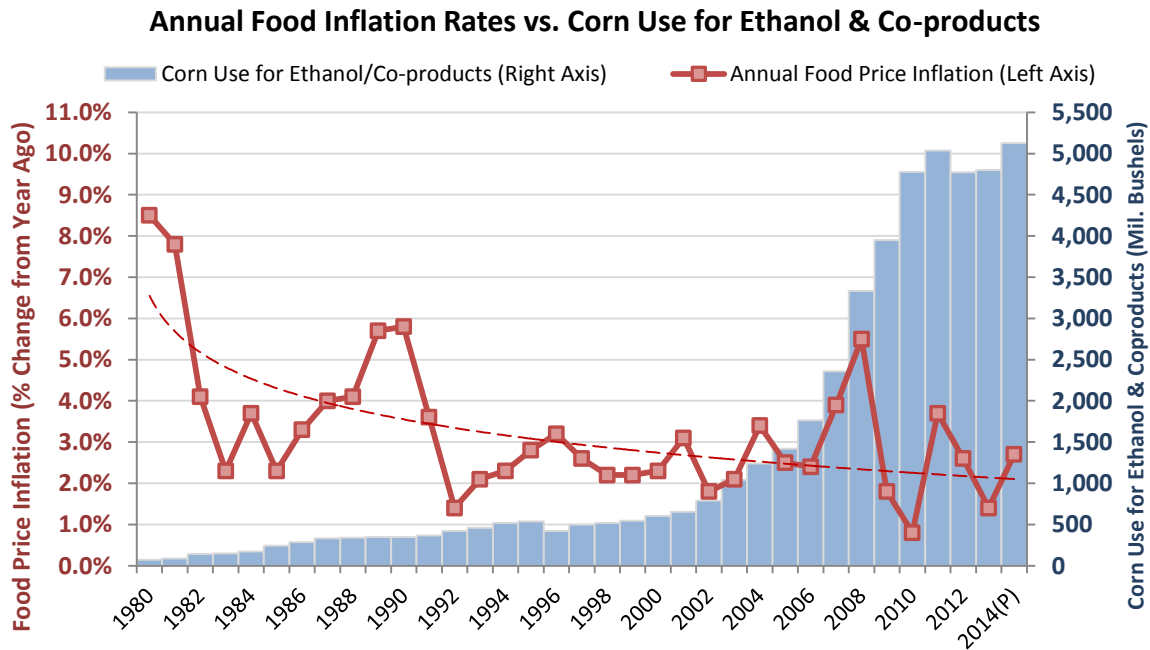
Moreover, every step in the food supply chain is **significantly affected by energy costs**—especially crude oil. In fact, a recent World Bank study found that **“most of the contribution to food price changes...comes from the price of crude oil...”** This explains why, even with the dramatic drop in grain prices, food price inflation is [projected](#) at a historically normal rate of 2.7% in 2014.

¹ A coefficient of 0.00 represents no relationship at all, whereas coefficients of 1.0 or -1.0 would represent a perfect correlation. Correlation coefficients are similarly weak even when food price changes are lagged by six and 12 months (i.e., to account for the fact that it takes time for changes in input costs to work all the way through the supply chain to the retail level). The six-month lag coefficient was 0.08 and the 12-month lag coefficient was 0.02.



Sources: USDA-ERS and Bureau of Labor Statistics

Just as there is no correlation between corn prices and retail food inflation, there is also no relationship between corn demand for ethanol and retail food prices.

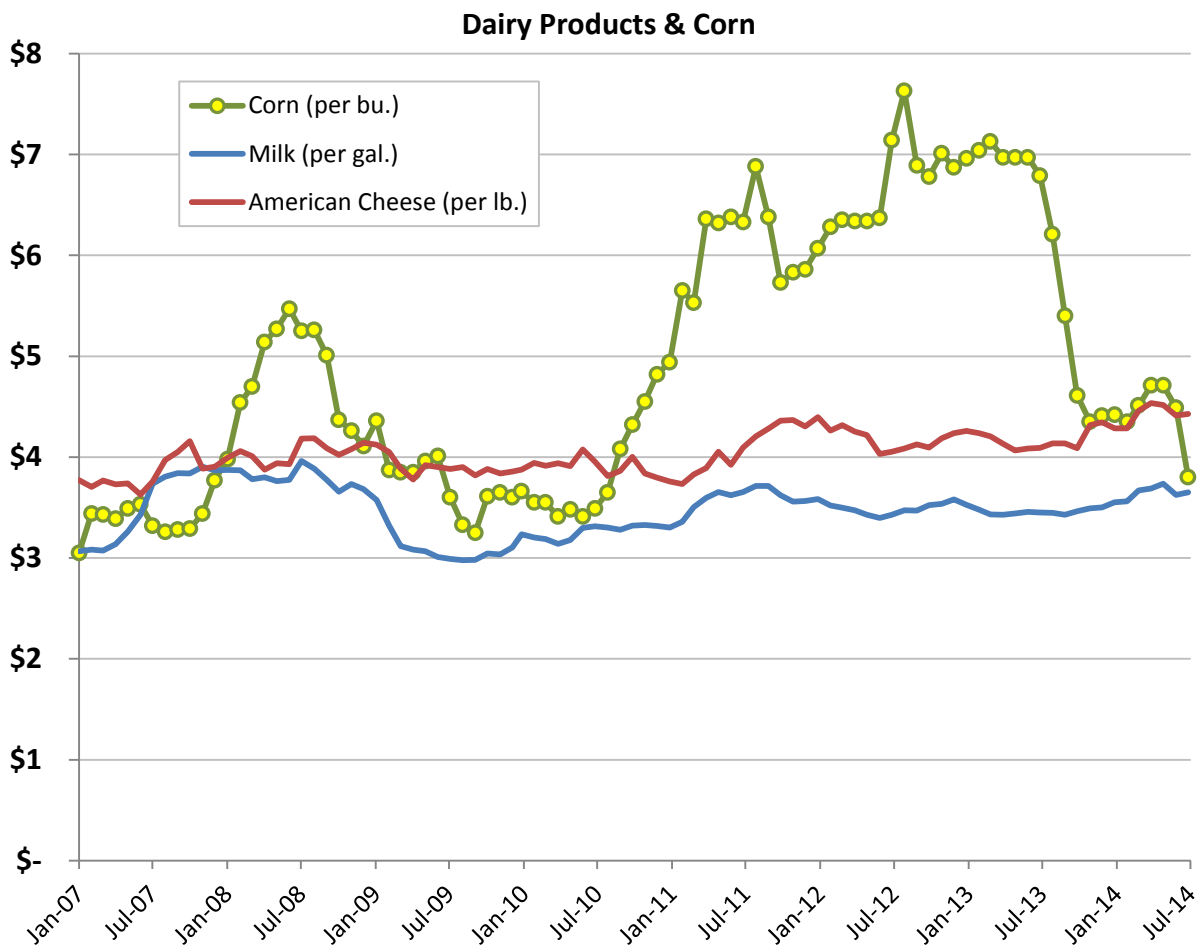


Sources: USDA-ERS, FAPRI

To further illustrate the negligible relationship between corn prices and consumer food prices, we examined retail price trends for meat, milk, and egg products that depend on corn as a primary input. We compared retail prices for common beef, pork, dairy, poultry, and egg grocery items to average corn prices received by farmers. Here's what we found:

DAIRY PRODUCTS

- Retail prices for key dairy items like milk and cheese have been **largely unresponsive** to changes in corn prices. In fact, since January 2011, milk and cheese prices have been *negatively correlated* to corn prices, meaning retail milk and cheese prices have tended to move in the opposite direction of movements in corn prices.
- Current milk prices are actually **lower** than prices observed throughout much of 2007 and 2008.
- Milk prices have been remarkably flat since the spring of 2011, averaging \$3.54 per gallon and ranging from a low of \$3.40 to a high of \$3.74.
- American cheese prices were generally flat around \$4/lb. until slightly increasing in late 2011 and early 2012. Prices dropped back to \$4/lb. in the summer of 2012, just as corn prices were hitting peak levels.
- Cheese prices have been on the rise since late 2013, while **corn has tumbled to four-year lows**.

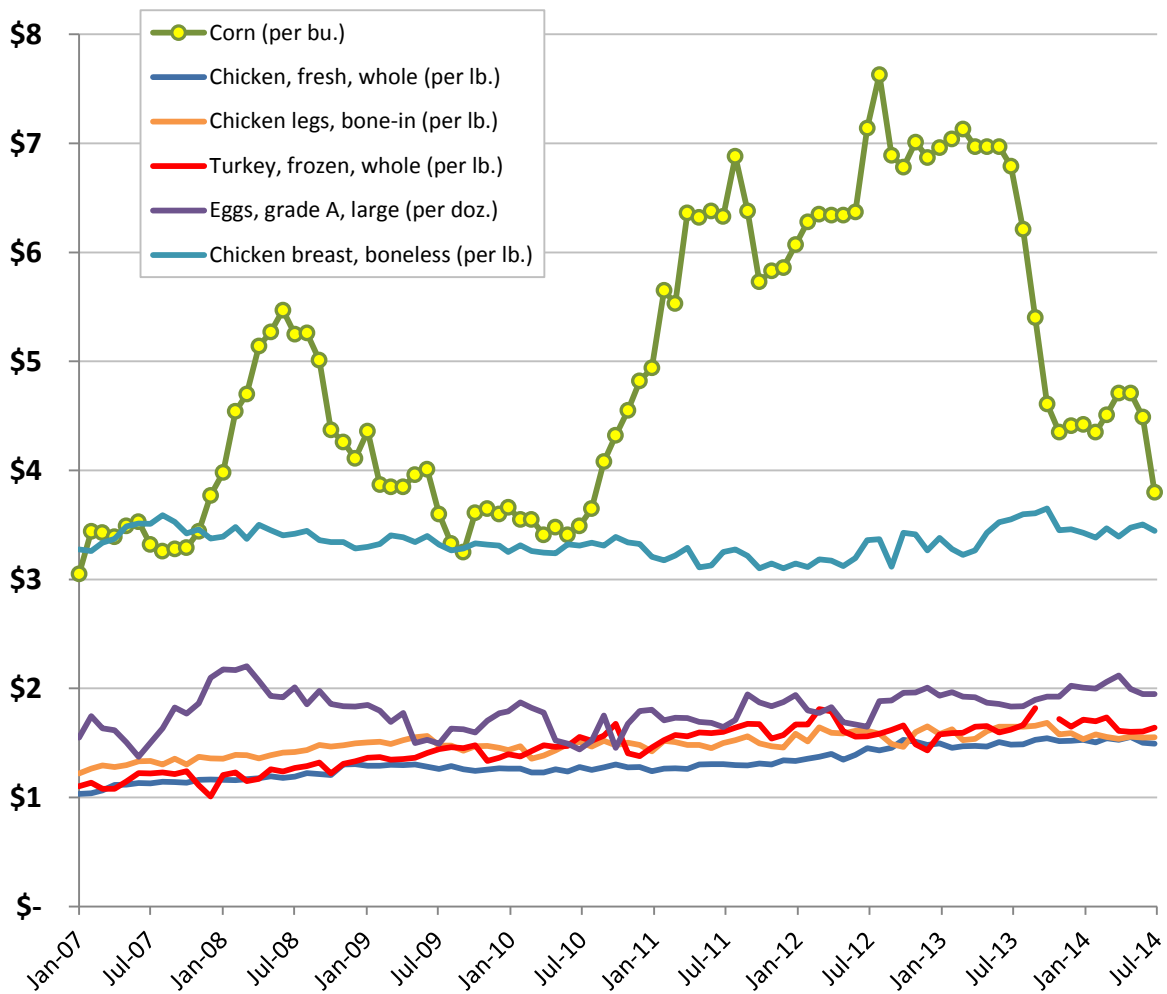


Sources: USDA-ERS and Bureau of Labor Statistics

POULTRY & EGGS

- Prices for some poultry items like chicken breast have been relatively flat over the past seven years. In fact, retail chicken breast prices averaged \$3.43 per pound in 2007, just **one penny less** than the average of \$3.44 per pound so far in 2014.
- Meanwhile, retail prices for other items (like chicken legs, frozen whole turkey, fresh whole chicken) have risen **steadily and smoothly** since 2007. Wide swings in corn prices did not interrupt or affect the gradual trend toward higher prices for these items.
- Retail egg prices have been impervious to changes in corn prices since 2007. Eggs sold for an average of \$1.99 per dozen in 2008, compared to an average of \$1.95 per dozen since the beginning of 2013.

Poultry, Eggs & Corn

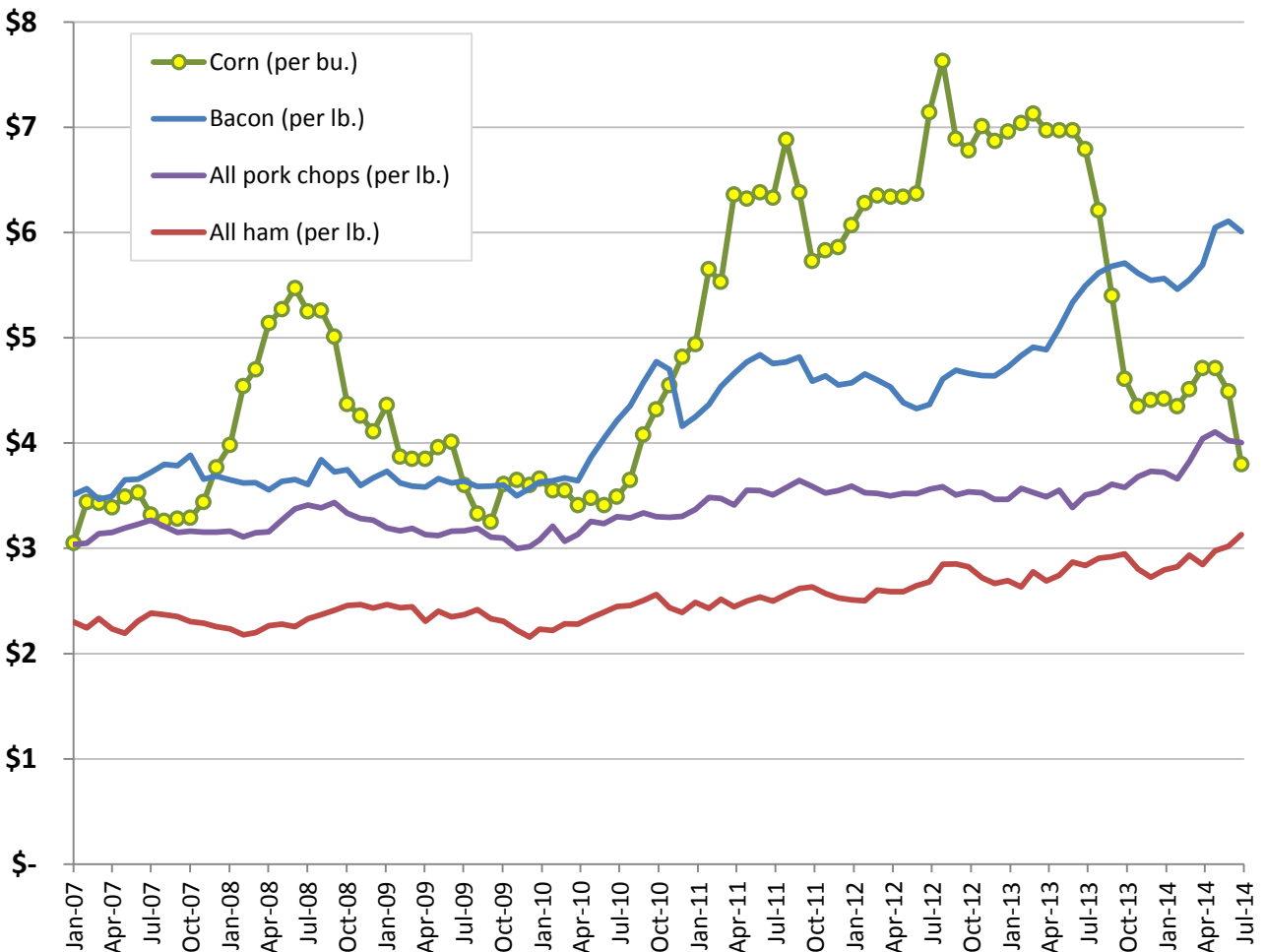


Sources: USDA-ERS and Bureau of Labor Statistics

PORK PRODUCTS

- Retail prices for pork products have not shown any meaningful relationship to corn prices over the past seven years. It is well documented that the recent acceleration in pork and bacon prices has been driven by piglet casualties resulting from **Porcine Epidemic Diarrhea virus (PEDv)**. These retail price increases have occurred at a time when corn prices have been plunging.
- Prices for pork chops, ham, and bacon were generally flat from 2007 through early 2010, then rose through the end of 2010—*preceding* an increase in corn prices.
- Prices for pork chops were extremely flat from January 2011 through early 2014. Meanwhile, ham prices gradually trended higher during this period.
- For bacon, price increases since the spring of 2013 (driven by PEDv) have had an **inverse relationship to falling corn prices** (-0.79 correlation since April 2013).

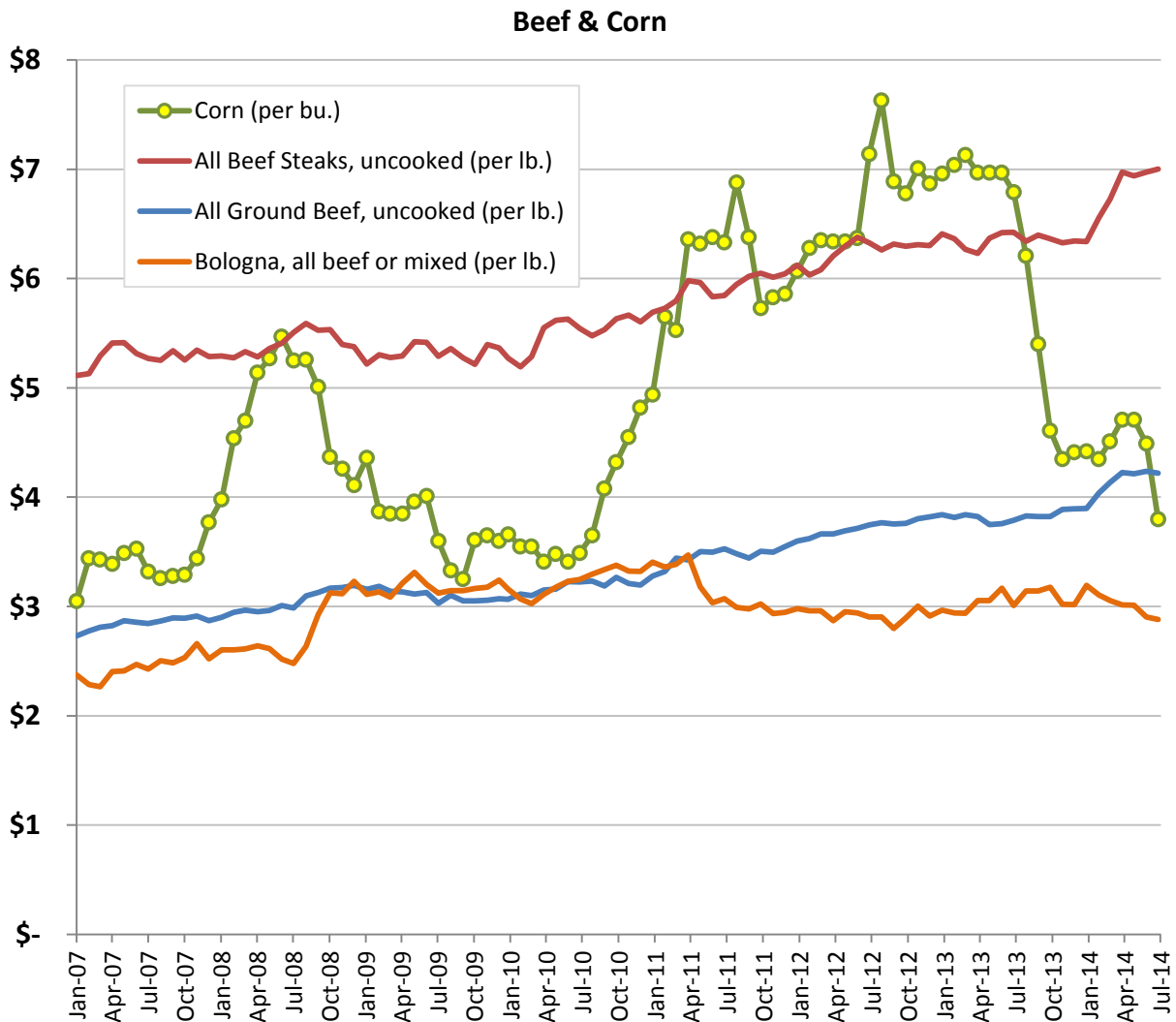
Pork Products & Corn



Sources: USDA-ERS and Bureau of Labor Statistics

BEEF PRODUCTS

- Retail prices for beef steaks were generally flat from 2007 through 2009. Prices increased gradually in 2010 and 2011, then leveled off in 2012 and 2013. Slightly accelerated growth in beef steak prices in 2010 preceded the increase in corn prices.
- Retail ground beef prices have steadily and smoothly trended higher over the past seven years, showing **no obvious response to wide swings in corn prices**.
- Prices for bologna area actually **lower** today than in the 2009-2011 timeframe.
- The recent uptick in retail beef steak and ground beef prices is being primarily driven by the **2012 drought**. Herd sizes were significantly curtailed in 2012 in response to **very poor pasture and hay conditions** in the High Plains, southwest, and other cattle producing regions.



Sources: USDA-ERS and Bureau of Labor Statistics

THE REAL DRIVER OF FOOD PRICES

As shown, retail food prices are not well correlated to corn prices or corn demand for ethanol production. However, as noted earlier, food prices closely track prices for crude oil and other energy sources. In fact, the United Nations' [food price index](#) has been almost perfectly correlated with [world crude oil prices](#) since 2000, with a **coefficient of 0.96** (1.0 represents a perfect correlation). Again, this is because **every link in the food supply chain is reliant on crude oil** and refined products in some way.

UN Global Food Price Index and Global Crude Oil Price

