

△ Contact Dr. Daryll E. Ray at the UT's Agricultural Policy Analysis Center by calling (865) 974-7407,faxing (865) 974-7298, or emailing dray@utk.edu. For more info, visit: www.agpolicy.org



## Impact Of Massive Grain Price Increases On Consumer Food Prices

Grain and livestock producers are not the only ones affected by the increase in crop prices that began in September 2006; urban consumers have been affected as well, or at least indices of food price changes would suggest so. Between September 2007 and September 2008 – just after crop prices hit their peak – the retail cost of cereals and bakery products for urban consumers increased by 12.3 percent. Between January 2000 and December 2005 the year on year price increase for cereals and bakery products averaged a little over 2 percent.

As prices peaked, some conceptualized the issues as one of food vs. fuel as much of the consumer price increase was attributed to the increased demand for corn as the basic component of ethanol production. The ethanol demand for corn increased by nearly 100 percent between the 2005 and 2007 crop years while corn prices increased by 149 percent. It is easy to understand why ethanol was identified as the underlying culprit of the jump in food prices.

But the increase in food price is much more complex than just an "ethanol did it" story. In fact, not even the corn price increase itself is simply an ethanol-did-it story. Let's first take a brief look at the run up in corn prices before discussing the food price issue.

Certainly the increase in ethanol demand played a major role in the corn price increase. But unregulated commodity markets which set no limits on long-only index funds also bear a significant responsibility for the grain price bubble which peaked in the late spring and early summer of 2008. Administration and legislative proposals are under consideration aimed at regulatory reform to prevent index funds from creating such speculative price bubbles in the future.

In addition to the increased ethanol demand and speculation, another factor was reduced wheat production in both the Ukraine and Australia. Both were due to weather factors. Both countries are major wheat exporters and their production shortfall left international customers searching for replacement supplies and suppliers, resulting in US farmgate wheat prices that jumped from \$4.06 in September 2006 to \$10.50 in March 2008. Since wheat is a major feed grain worldwide, not just a food grain as we in US tend to think of it, what happens in the wheat market has a large impact on the corn market.

Also at fault was the relatively low year-ending stock of grains that thus provided an inadequate cushion for the changes in the demand for corn and the supply of wheat. The relatively low year-ending stock levels for major grains has been policy driven.

One of the goals of the 1996 Farm Bill was to get the government out of the business of holding reserve stocks – what Henry A. Wallace called an ever-normal granary. It was argued that government stocks substitute for private stocks and the commercial sector would hold adequate stocks to prevent major supply disruptions.

In addition, it was believed that the liberalization of international trade would make the holding of stocks obsolete because a country cereals and bakery products, the farm value of the final grocery store product was 6.4 percent in 2006 and 9.6 percent for all of 2008. By December 2008 the farm share of cereals and bakery products had dropped to 7.5 percent. For the average market basket of food products the farm share was 20.5



**DR. DARYLL E. RAY** Agricultural Economist University of Tennessee

farm share was 20.5 percent in December 2008.

Other factors were also at work here.

First was the jump in fuel prices that affected everything from automobile fuel to the diesel fuel so important to the transportation sector that moves food products around the country and world.

Second, the food sector is highly competitive. When annual increases in costs are relatively small over a time span such as in the 2000 to 2007 period, processors and retailers tend to absorb those cost increases rather than cede market share to a competitor.

So when a major event like the run-up in crop prices between late 2006 and early to mid-2008 occurs, it gave the food industry the opportunity not only to cover the immediate ingredient cost increase but also the longer term increases they have previously absorbed.

As a result we often see a larger increase in grocery store prices of cereals and bakery products at times when grain prices go up and farmers get the blame. This observation is in contrast to the minimal reduction in cereals and bakery product prices that tend to follow significant reductions in grain prices, everything else already considered.

The extent of the food price increase in 2008 is not unrelated to the increase in grain prices but the direct impact is likely much less than most often portrayed. The real impact of such a massive jump in grain prices comes much later when the livestock industry has fully adjusted to the higher feed prices by slashing production.

There are two major reasons why grain-based increases the prices of livestock products hit consumer budgets more severely than grainbased price increases in foods that directly include grain as ingredients, such as cereals and bakery products.

The first is that the farm value portion of the livestock prices is larger than it is with cereals. That is, if the price farmers receive for livestock products increases substantially, passing along that additional cost by the food industry legitimately requires a significant pass through of the additional cost via price.

Secondly, livestock products tend to comprise a relatively large share of consumers' food budgets.

Of course, there can be offsetting influences such as a recession-based reduction in the demand for livestock. Meat prices would be much higher now and in the months ahead if the economy were not in a recession, causing consumers to forego higher priced food items.

All this is just to say, that it's the delayed pact on meat prices and other livestock products following a doubling or tripling of grain prices that can drive food prices skyward, but after a biological delay. Food price increases that occur simultaneously with grain price increases are influenced some by the grain price increase but usually are mostly caused by other factors or considerations. It is the timing and the source of the major the impacts on food consumers that may be in question, clearly, there is a major impact of massive increases in grain prices on food prices. Whether the impact of grain price increases is used as an immediate excuse or is a very real market-driven cause of later food price increases, consumers would benefit from a moderation in extreme grain prices that a grain reserve could provide. It seems clear that one could easily make the case that the last 32 months has served as an example of a massive disruption in the agriculture and food economies - one that has cost consumers and users of farm commodities billions and billions of dollars - that could have been prevented if an US or international grain reserve had been in existence. Δ

that was short of stocks could buy them from a country that had an exportable surplus. Little to no attention was given to the inevitable situation when two or more important exporters would have supply problems at the same time.

Of all the reasons for the grain price run-up, this one is the least understood and least discussed, but arguably is the most general and therefore the most important reason of all. An adequate reserve can prevent extremes in prices, no matter what the cause. Whether there is a politically-motivated jump in demand, such as ethanol mandates or a sudden shift in how a country wants to feed its people, or a catastrophic natural-disaster-based drop in supply in the US or elsewhere, it makes no difference. It makes no difference what the market is shock is when an adequate-sized and reasonably-managed reserve of staple grains is in place.

But it's the increase in food prices that we want to get to here. As suggested earlier, just connecting the dots between the increase in ethanol demand, the run-up in grain prices and the early-on increases in food prices is tempting and has a logic to it but would be a far from complete explanation.

For one thing, in the case of the foods that showed the most increase early-on, the value of farm-based ingredients is startlingly small. For

DR. DARYLL E. RAY: Agricultural Economist, University of Tennessee