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

The Crop Price Run-Up: Some Proclaimed Causes That Were Not Causes After All

DR. DARYLL E. RAY
Agricultural Economist
University of Tennessee

DR. HARWOOD D. SCHAFFER
Research Assistant Professor at APAC, University of Tennessee

The causes of the quick run-up, peak, and current price of grains and oilseeds that is well above the levels of just five or six years ago are of interest to many. In the US the farm sales of crops increased from $122 billion in calendar year 2006 to a forecast of $173 billion for calendar year 2010.

Crop farmers are hoping that the underlying causes indicate a shift to a new plateau in prices, well above the prior plateau that began in the early 1970s. Livestock producers, having been hit hard by the sharp feed price increases of the last couple of years, are hoping that prices will become more predictable. A number of grain importing nations have been leasing land or looking into leasing land in developing nations as a means of protecting themselves against a surge in prices like the one they saw from 2006 to 2008 and beyond.

Last week we discussed the conclusions of an IFPRI (International Food Policy Research Institute) Research Monograph, Re¬flections on the Global Food Crisis: How did it happen? How has it hurt? And how can we prevent the next one?, by Derek Headey and Shenggen Fan on the causes of the recent rapid change in crop prices. Headey and Fan argued that three primary causes of the jump in prices are: 1) demand for biofuels, 2) the decline of the US dollar and the concomitant rise in oil prices, and 3) "the influx of foreign exchange reserves for energy-exporting countries significantly [strengthening] their demand for US cereals."

This week we want to look at three of the potential causes that they eliminated: 1) growing demand for grain fed meat by an increasing middle class in China and India, 2) a global decline in the per capita production of grain during the prior period, and 3) a decline in the world stock of grain; and one of the policy conclusions that they mentioned – the need for a grain reserve to stabilize supplies.

A decade and one-half ago, as the 1996 Farm Bill was being debated, optimism was in the air as the USDA (United States Department of Agriculture), and the CBO (Congressional Budget Office), among others, projected that ever-increasing imports of corn by China would ensure continuance of the relatively high corn prices experienced at the time. Those ever-increasing Chinese corn imports, we were told, would be needed to provide animal feed to produce the meat that a growing middle class would be demanding.

But those mid-to-late 1990s' predictions proved false. Instead of importing corn, China became an important net exporter of corn, exporting even more corn during that period than it had been predicted to import. That reality contributed considerably to the collapse in corn and other grain prices in the late nineties and early 2000s, which lead to the massive emergency payments to farmers during that time.

The "China" argument went into retreat – temporarily. It quickly rose again, stronger-than-ever, when grain prices took off in 2007 and 2008. The China argument was the same – primarily the surging middle class in China, increased demand for meat and the implied need to import massive amounts of feed grain. This time India was added as an additional new premier demander of feed grains.

During the food-crisis period the China-India demand argument was repeated so often that it became conventional wisdom seeping into many major reports and these anticipated exports were touted as having the effect of increasing corn prices for the benefit of US farmers.

Looking at China's persistent net exports of corn, and India's role as a net exporter of grains, we were, and are, skeptical of this scenario. While China has become a major importer of soybeans, there is no indication that they intend to become major importers of corn or any other grain. After a period of declining corn stocks, China's stocks have recently been growing, providing a means of evening out variation in year-to-year production. To us, neither their intentions nor the data suggested that China or India played a significant role in the recent run-up in grain prices.

This latest IFPRI report comes to this same conclusion, "In our reckoning, the Asian-diet hypothesis is not corroborated by available data. Although it is true that diets in countries like China and India are changing, it is not at all obvious that these countries are becoming more dependent on cereal imports." They go on to note that "Spain and Mexico stand out as the two countries that have most increased their cereal imports in the 2000s. No Asian country figures in the top 10 of that list, and China actually imported fewer cereals in the 2000s than in the 1990s."

The declining grain per capita production has also been cited as one of the causes of the price spike that began in late 2006 and peaked in 2008. The concern was that cereal production was not keeping up with growth, despite the strong conventional wisdom assertions that the low prices of corn, wheat, and rice in the 1998-2001 period were the result of over production. While US wheat production declined in this period, so did wheat exports and stock levels – the demand was not there. At the same time, as the result of improving yield technologies and increased acreage, US corn production continued to increase in the face of low prices – some would argue that farmers work to compensate for low prices by producing more corn per acre to overcome the low prices.

Headey and Fan point out that most of the decline in production involved the countries of the former Soviet Union and several Eastern European countries. But interestingly, despite declining production, these countries actually increased exports, which would put a downward, not upward pressure on prices.

Declining grain stocks were also looked at as a cause of the price spike. As Heady and Fan noted, when China's stocks are taken out of the equation, world stocks of the major cereals did not change enough to cause the increase in prices. Because Chinese stocks are not readily available to the world market, they argued that they had little impact on prices, whether Chinese stocks were low or high.

When we were in China, we made a presentation showing changes in Chinese production and ending stock levels. The Chinese researchers were surprised at our numbers – not the level of the numbers, but that we even had numbers. We explained that we got our numbers from the USDA. They explained that when they want to measure the level of stock holding, they have to survey individual farmers as there are not publicly available numbers on stock holding in China.

It should be noted that the USDA has no direct information on stocks, but generates them as the difference between observed production and estimated consumption. Over time, the USDA has had to revise these numbers as many as four times between 2001 and 2006. In one case, China was exporting corn at a time that USDA numbers would have suggested that China did not have any corn left to export. As a result the China numbers had to be revised.

With China out of the picture as a factor, one must look to the US when it comes to corn, because the US accounts for more than half of corn exports in the world. During the crisis, US corn prices were well above what they would have been expected to be given the slight decline in year-ending stock levels. Headey and Fan conclude, "it would appear that this crisis was not precipitated by stock declines.

Perhaps most surprising from our perspective is that despite their reservations, Headey and Fan write, "First, the world currently relies on the grain reserves of just a few exporting countries to stabilize prices and ensure stable food supply. However, this arrangement has been informal since the failure of negotiations on food reserves after the 1972–74 crisis, and it has largely broken down due to rising prices and new just-in-time inventory methods."

While expressing hesitation over establishing more "formal grain reserve arrangements" and support for what we see as a dangerous concept of virtual reserves, they then say, "Other policies might also help to ensure short-run access to international food imports. These include the World Bank's US$1.2 billion rapid financing facility, the Global Food Response Program, or a proposed international grain reserve managed by the WFP."

While this is not a resounding argument in favor of reserves it does represent a change. Before the crisis, any discussion of reserves was off the table. For an IFPRI publication to consider the reserve issue at all is a move in the right direction. Properly managed reserves can protect farmers in times of extremely low prices and consumers in times of extremely high prices. In between those wide bounds, prices can allocate supplies among users, and international humanitarian reserve can be used for those who are priced out of the market. Δ

DR. DARYLL E. RAY: Blasingame Chair of Excellence in Agricultural Policy, Institute of Agriculture, University of Tennessee

DR. HARWOOD D. SCHAFFER: Research Assistant Professor at APAC, University of Tennessee