

Supply Response To Sky - High Prices: Old Reliables And An Eye - Opening New Approach



DR. DARYLL E. RAY
Agricultural Economist
University of Tennessee

The steep ramp-up of grain and oilseed prices over a couple of years only to drop by one-half in a matter of a three or four months has been extremely confusing to lots of folks. Much has been written about the run-up but less has been said about the fall.

The fact that the 50 percent drop took place so quickly was a surprise – it usually

takes a couple or so production periods – but otherwise such a drastic price drop is as predictable as night following day.

That is why, based on past events, we tell farmers that it is in their long-run best interest to hope for prices that fluctuate within a “normal” and reasonable – but fairly wide – band that covers production costs on average.

While winning the lottery has a nice ring to it, farmers should not want prices to triple and quadruple over a short period of time.

So, why is that?

In economics lingo, it is called supply response. In every day language it goes like this, “high prices cure high prices.”

For crops, high prices of the triple and quadruple kind stimulate farmers to bring additional area into production, encourage investment in yield-enhancing technology, and drive customers to seek alternate suppliers.

In fact, it takes price increases of such a magnitude to get much of an aggregate response in the acreage used for major US crops. Total acreage does not change much with “normal” variations in prices, either up or down. In the case of a drastic drop in prices, acreage does not decline quickly – in contrast to the rush of incoming acreage when prices explode.

So how did it play out this time?

Following the price rise that began in the fall of 2006, we saw US farmers switch crops and make use of every possible acre they could reasonably farm. As Conservation Reserve Program contracts came up for renewal, many farmers with acres suitable for cropping did not renew them. With increasing prices, every acre counted.

For the eight major crops in the US (corn, soybeans, wheat, rice, barley, oats, sorghum, and cotton), harvested acreage increased from 217 million acres in 2006 to 231 million acres in 2008, the highest level since 1998.

Similarly, Brazilian acreage for the same eight crops also increased from 103 million acres in 2006 to 107 million acres in 2008. Farmers around the world see the same prices and respond just like US farmers.

Part of the price increase resulted from unusually large wheat crop failures in several areas of the world. With the return of more normal circumstances, world wheat harvested area rose from 526 million acres in 2006 to 554 million acres in 2008. At the same time the yield increased from 41.6 bushels per acre in 2006 to 45.3 bushels per acre in 2008.

Those changes are a part of the normal pattern that we have come to expect.

With high prices, we were not surprised to hear seed companies talk about yield breakthroughs and numbers that seem like some pipe dream.

Just as acreage quickly comes into production when prices skyrocket but drains away slowly when prices tumble, yield-enhancing technology, once introduced, is here to stay no matter the price level. In fact at low prices individual farmers feel they need high yields to keep gross income from falling through the floor.

It also is not uncommon, when prices surge upward, for countries to step-up efforts to secure future international access to agricultural production as a means of ensuring their long-term food security.

This is usually done by diversifying sources of international supplies and may include provid-

ing loans or grants to other countries to improve their agricultures, as was the case in the 1970s when Japan provided funds to help develop Brazil's capability to produce soybeans.

This time around we are seeing an additional approach being introduced that may push the outer envelope of using other countries' agricultures to further a country's food security goals.

South Korea's Daewoo Logistics is seeking to ink a deal to enter into a 99-year lease on 2.5 million acres in Madagascar to produce corn and other crops for Korean consumption. They expect to produce 232 million bushels of corn on that land in 15 years. By way of comparison it should be noted that in 2005, Korea imported 231 million bushels of corn from the US.

China has its eyes on 2.5 million acres in the Philippines and an unreported amount of acres in the Zambezi River valley in Mozambique. It is reported that the Chinese hope to boost annual rice production from 100 thousand tonnes to 500 thousand tonnes in the next five years. Rice is not a staple in Mozambique so it is expected that most of the rice will be shipped to China.

And China and Korea are not alone. We have seen reports that oil-rich countries in the Middle East are also seeking lands to provide a stable supply of food for their domestic consumption.

Recent unconfirmed media reports suggest that these countries are seeking as much as 20 million acres on which to grow crops that can be shipped back home for domestic consumption.

This agricultural production becomes a link in a supply chain and almost functions like domestic production. If Daewoo Logistics produces it and ships it on Daewoo vessels back to Korea where Daewoo sells it, it never really enters into world trade.

Contracts could be written so both “visitor” and “home” countries benefit. For example, the visiting countries could agree to provide investment in infrastructure and agricultural research and extension and increased access to reasonably priced agricultural inputs.

With such an arrangement, it is possible that the home countries could end-up with more agricultural production on the remaining land than could be reasonably expected from all the land and no visitors.

But without considering complications of various sorts, that ideal scenario likely describes “the best of all possible worlds” in terms of outcome, a situation seldom experienced in real life.

We expect there will be push back from several quarters, especially if the home countries have farmers already occupying the land – but, of course, the list of possible complications does not end there.

Nonetheless, it seems clear that several countries will likely lease land in other countries to augment their domestic agricultural production needs.

There are a couple of lessons here:

The first is that extraordinary increases in crop prices are not good for anyone, not livestock producers and other grain demanders of the high priced grain of course, but also not major crop farmers either because it sets up a world supply response that sentences farmers everywhere to years of low prices.

This is not a new lesson. We just have not taken it seriously in the past.

The second lesson is that nothing scares many of the world's developing countries more than the prospect of not having sufficient quantities of reasonably-priced food to feed their populace.

Again, this should not be a new revelation, but the usual prescriptions for food and agriculture at various levels by various bodies seem to reveal that an awareness of food security issues has not achieved even back-burner status as of yet.

To us, the “leasing of foreign land alternative” is an indication of how far “rich” developing countries will go to achieve food security goals and their ability to find substitute means to get around imposed international trading rules.

△