# Farm policy debaters need to identify source of price and income problems in crop agriculture before proposing solutions

Understanding the SOURCE of crop agriculture's persistent price and income problems should be—to borrow a phrase from Ford Motor Company—"Job One" as we begin to debate the next farm bill. Without an accurate diagnosis of the root causes of crop agriculture's woes, it is very unlikely that any given policy will improve the situation.

In this column, we will discuss one of the root causes of agriculture's problems: the uneven growth of crop supply and demand. In other columns we will focus on why crop agriculture finds it so difficult to climb out of low price and income holes.

## Crop Supply

Let's begin by considering what causes supply to grow. Yield increases are the major source of growth in crop supply (rightward shifts of the crop supply curve). As we say that, it is important to note that most permanent yield increases can be traced back to technologies that were developed at publicly-supported Land Grant universities and federal research stations. That is, the taxpaying public pays for a large portion of the ongoing growth in crop supply.

Public investment to continually expand the productive capacity of U.S. agriculture is, of course, a good thing. However, the continual full-use of that expanding capacity—regardless of demand conditions—is a problem. Individually, crop farmers do not have the ability to influence their prices and profits by adjusting industry output in the short-run or industry capacity in the long-run.

In contrast, non-agriculture industries routinely operate well below full productive capacity, saving all-out production for times of peak demand. And, leading industry firms make deliberate decisions about long-term expansions or contractions of production capacity.

## Crop Demand

If the increase in supply is driven by factors other than market conditions, then what about agricultural demand, specifically domestic demand? Does demand respond to changes in price? More specifically, do lower prices spur demand sufficient to absorb the increased production?

Domestic demand for crops grows steadily as the population increases and that is about it. Besides population, the other major domestic demand shifter is per-capita income. Since we are a "rich" and already well-fed country, the demand for food changes very little with increased incomes.

People buy more services attached to the food and a different mix of foods as they become richer, but total consumption of food does not increase proportionally with changes in income. Feed demand works the same way but is a derived rather than direct demand.

In contrast, the per-person demand for clothes, entertainment, housing and most other non-food products increases briskly with higher incomes.

Export growth is not always the answer either. Even though exports are often trumpeted as the growth market for crops, export demand often does not grow at all for decades at a time. Over the last two decades, export demand for each of the major crops oscillated around a flat trend.

Sustained growth in crop exports is rare. Over the last century, there have only been three time periods in which there has been sustained growth in crop exports for a five to ten year period. Two were during world wars and the third was in the late 1970s and early 1980s. All three export growth periods resulted more from political events or decisions than from economic conditions or considerations.

Every so often it is a good idea to do an export reality check. Unlike bolts or paper clips, food is not a commodity that countries (including this one I might add) want to import. They may be forced to import food because of their natural resource base and/or because population and income growth is increasing food demand faster than the growth in their agriculture's productivity. But, the desire is always to produce as much food locally as is possible. As a result, on a year-to-year basis, imports rise and fall to offset the variability in crop production in importing countries.

## Bottom Line

For the last hundred years and for the foreseeable future as well, growth in publicly-funded agricultural supply routinely exceeds growth in domestic and export demand. Lower prices and incomes result.

But, shouldn't the lower prices significantly reduce the quantity supplied by farmers and/or significantly increase the quantity demanded by consumers and therefore cause a self-correction? Yes, it should, but no it doesn't. We will explain the "but no it doesn't" part in a future column.

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