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Increased Agricultural Productivity Is One Piece Of A Complex Puzzle

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The jump in prices of agricultural commodities in 2008 was devastating not only for US dairy and livestock producers – its repercussions could be felt around the world with food riots in many countries and trade restrictions in a number of others. For many, that this crisis could occur at all was a wake up call.

Given recent discussion by the Food and Agriculture Organization (FAO) officials and presenters at the World Food Prize presentation in St. Louis, the crisis and increase in the number of hungry in the world provides an opportunity to promote accelerated growth in agricultural productivity. Many at the meeting either called for or announced future productivity gains.

Ellen Kullman, CEO of DuPont, agrees with FAO that food production needs to double by 2050 to meet the needs of a growing world population. In addition she announced that DuPont expects that corn and soybean yields will increase by 40 percent over the next nine years.

Given the October 9th USDA projection of a 164 bu/ac corn yield, we might see a national yield of 230 bu/ac in 9 years. If 80 million acres were to be planted to corn in 2018, we could see US corn production increase from the present 13 billion bushels to nearly 19 million bushels.

While increasing yields is an excellent long-term strategy, it is hard to make the case that the lack of productivity was the cause of the recent crisis. The problem was not that we did not have enough production, but we were afraid that we weren't going to have enough. Even though wheat production was down, there was enough rice to meet the world's needs.

As a result of the fear, speculators helped prices hit dramatic highs that resulted in the crisis that drove and additional 250 million into the situation where they were chronically hungry. They joined the 800 billion who were already in that situation.

Shortfalls in production and demand shocks occur periodically and are going to occur in the future. Given the projections for climate change, significant crop production shocks are likely to occur more frequently in the future.

Despite the crop research announcements, it is not production capacity that is the immediate problem. It is the variability of production and demand that we need to be prepared for in the near future.

Rather than a spurt in demand from increased ethanol production, next time it may be a sharp drop in supply due to weather or other natural phenomena. It is not a matter of if, but when.

Had the present excitement in increasing productive capacity occurred two years ago, it would not have had an impact on 2008 crisis. Similarly, this current discussion will not have an impact if we have production or demand shock in the next three to five years.

What would have made a difference? Putting some of the less than $2 per bushel corn into a reserve during 1998 thru 2001 would have been a game changer. Just the presence of such a reserve would had a calming effect

We are supportive of research that increases our capacity to produce various crops at higher yield levels. We want to have the capacity to produce more than we need in any given year. Hopefully, research will result in productivity increases that will exceed increasing demand.

But, to keep prices from crashing and to address increased volatility, we need to manage the growing productive capacity of agriculture just as in other industries. On a recent trip, we flew on four flights and each plane was full as stand-bys filled any available seats. That is quite a contrast to a couple of years ago when we would be on aircraft that were 40 to 60 percent full.

Earlier this year we took a trip that landed at a Western airport where we saw a number of aircraft parked in a little used section of the airport. We asked our hosts what was going on and were told that the airline was taking a number of craft out of service to reduce capacity and increase their profitability.

Given the price we had to pay for our tickets and the fullness of the aircraft we flew on, it appears that the airline strategy of reducing capacity has worked.

Given the level of agricultural research that we hear about, the problem facing crop agriculture may be that we are going to have more capacity than the demand. At the same time this increased capability does not address the variability and volatility that is inherent in food production.

We shouldn't expect crop research to solve the problem of variability. That will require reserves and the ability to manage the productivity increases that are coming down the pike.

We should also remember that, while much of the focus has been on the problem of 1 billion people suffering from chronic hunger, increasing productive capacity will not solve the hunger problem for those who have too little money to buy sufficient food. Production does not equate to feeding the hungry.

As we academics might say, increasing productivity is a necessary but not sufficient condition. Certainly, we can't feed the hungry if there is no production. Likewise, we can't feed them if they don't have the money to purchase what is produced.

With regard to developing countries, there is a divergence between the kinds of technologies that improve the productivity of US farmers and the kinds of technologies that are appropriate and will best help poor peasants who make up the bulk of the farmers in the world.

Here again the pronouncements about future productivity gains are not all that reassuring. It is likely to be the agricultures in the developed countries, like the US, that will most benefit from the new technologies envisioned for the future. But to better feed the 60 percent of the hungry that depend on agriculture, a different set of research investments may also be needed.

Clearly, in recent decades the world community has been under-investing in appropriate technology that meets the needs of small holders. Increased productivity and profitability would boost rural family well-being while allowing them to stay on the farm until jobs in town are available. That in turn – in the decades ahead – could allow for increases in farm-holding size that perhaps could benefit from some of the same research that benefits producers in the US.

The current frenzy to increase investments in agricultural productivity helps ensure needed future growth in agricultural productive capacity.

The recent food crisis fanned that frenzy, but it is important to keep in mind that increased productive capacity does little to address the "food-crisis-type" volatilities like the one we just experienced, and by itself increased production will not defeat world hunger. Δ

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