

US share of world crop exports trends lower with or without supply management

Though the 2018 Farm Bill has been in effect for just a year and a half, the ability of that legislation to address the current challenges facing agriculture (China's response to US tariffs, COVID-19, and increasing year-ending stocks) has resulted in a pivot to serious discussions about the nature of the next farm bill. We have long been pointing out the logic of a supply management program as a replacement for the current hodgepodge of ad hoc and legislated program responses to the current regimen of declining agricultural prices and net farm income in the US.

As a result of the precipitous decline in net farm income, we see have seen more a widely ranging discussion of supply management programs than has been seen since the enactment of the 1996 Farm Bill.

This has triggered a response from the opponents of New Deal inspired farm proposals.

One set of those responses has come from analysts who publish on the farmdocsdaily website (<https://farmdocdaily.illinois.edu/>) maintained by the Department of Agricultural and Consumer Economics at the University of Illinois Champaign-Urbana. Last week we discussed the first paper of their ongoing series challenging supply management programs (<https://tinyurl.com/yyo9tw5c>).

The second paper of the series, "Land Retirement - Part II: US Role in World Crop Markets and Effectiveness of Retiring US Land" by Carl Zulauf, Nick Paulson, Jonathan Coppess, Gary Schnitkey, and Krista Swanson (<https://tinyurl.com/yctprcfo>), sets forth its intentions clearly when the authors write, "Its central thesis is that a declining US role in world crop markets, combined with a shift to production outside the northern hemisphere, calls into question whether US land retirement programs can raise US prices even within a single crop year unless they are large and thus costly. They are also likely to lead to a loss in US market share."

The authors then make the case that the US share of world exports and world production of major crops has declined between 1996 and 2009 without comparing the cost and benefits of a supply management program to the programs that have been in effect since 1996.

While the authors assert that supply management programs are responsible for these losses in market share, what they don't talk about is the relationship or lack thereof between crop export and production trends during the period they examine (1996-2009) and the farm legislation in effect during those same years.

You see, supply management programs with their land retirement policies were not in effect during the 1996-2019 time period.

But before going into the heart of our analysis, let's look at the data that Zulauf et. al. share with us. They graphed the 5- year olympic average export share of corn, cotton, soybeans, and wheat for non-Northern Hemisphere countries along with the US export share of exports and production for these same crops.

They then write "Since the 1996 Farm Bill, share of world exports originating in non-northern hemisphere countries jumped from 15 percent to 42 percent for corn; 38 percent to 52 percent for cotton; and 28 percent to 57 percent for soybeans.... Only wheat's share changed little: 21 percent to 22 percent..."

At the same time, while corn production increased from 9.2 billion bushels in 1996 to 13.6 billion bushels in 2019 (a year with crop production problems), according to Zulauf et. al.'s

analysis, the 5-year olympic average US share of world exports declined from 72 percent to 35 percent.

The authors attribute the losses to slippage—1) the removal of least productive land, 2) the increased use of inputs on land that is planted, and 3) “other countries increase production of the diverted crop in expectation of higher prices.”

The problem with this analysis is that no acreage production programs were in effect during the 1996-2019 period. In fact, during part of that period the US had a demand enhancement program (the Renewable Fuels Standard) which increased the US production of corn.

And yet non-northern hemisphere countries increased their world share of both the production and the exports of corn. These share declines for the US were seen in the absence of a supply management program and the presence of a demand enhancement program which drove US corn production decisions.

So, what in the world is going on?

1) Technology - Where the latest in seed and other agricultural technologies were once the sole purview of US farmers, that is no longer true. Thus, starting from a lower yield base, farmers in non-northern hemisphere countries have been able to more dramatically increase their production in percentage terms than US farmers.

2) Land - While US farmers were able to significantly increase the number of acres that they put into production between 1620 and the end of the 19th century, they now operate with a relatively fixed land base. Today, production increases in the US are almost wholly dependent on technology or arbitrage among the crops. At the same time, farmers in places like Brazil can bring vast new acreage under agricultural production. They do so despite low prices similar to what we saw in the US after the Civil War. During that period acreage increases were not linked to price—corn acreage increased from 35 million acres in 1869 to 95 million acres in 1900 while corn prices declined by 50 percent and yields remained flat—and there is little reason to think that today’s situation in non-northern-hemisphere countries is any different. They are in the position the US was in during that period.

The result of these two factors suggest that, for years to come, farmers in non-northern hemisphere countries are going to increase production at a steady rate without regard to price. We saw that happen in the US for over nearly 300 years so we see no reason why farmers in other countries would behave any differently.

These two factors also remind us that the US does not have the capacity to fulfil the increase in the world’s growing need for food. We do not have enough suitable acres meet the demand. They do.

At the present time the US does not sequester stocks in a government reserve (an essential part of a supply management program), so, in addition to production limitations, we are no longer a dependable source of essential grains and seeds when the world is faced with a widespread food emergency.

Others may not buy their storable commodities from us on a regular basis but in the past, they have depended on us as a source they could call upon in an emergency.

The last point we would like to make is that the US price matters. It is the reference price for crops sold all around the world. They all move in parallel with US commodity markets, thus if we have supply management policies, farmers around the world will still price their product relative to US markets. Why would they leave any money on the table by underbidding the US by any more than they now do?

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