New corn price era or back to an old one?

The August "World Agricultural Supply and Demand Estimates" was released on August 12 and contained a grim forecast for corn farmers and thus most producers of storable agricultural commodities in the US and around the world.

With a forecast 2020-2021 year ending corn stock level of 2.756 billion bushels, the stocks-to-use ratio rises to 18.7 percent, the highest level seen since 2004.

As a result, the forecast season average price received by farmers is $3.10 per bushel, the lowest the corn price has been since the 2006 crop year, the year before the new price plateau of $4.00+ corn has been said to begin. In 2008, Darrell Good and Scott Irwin argued that "a new era of higher average nominal prices [had begun] in late 2006" (https://tinyurl.com/y4sfraza).

We were doubters of the permanent New Plateau discussion from the beginning. We never questioned the fact that as long as corn demand for ethanol production kept increasing by 500 million bushels a year, the price of corn could remain above the $4.00 level.

Our belief was that, in the absence of other factors, once the ethanol demand leveled off, corn prices would take a tumble, initiating the traditional long period of prices well below the full cost of production. This would then result in lower prices for other storable commodities whose prices are generally a multiple of the corn price.

By the 2014 crop marketing year, ethanol demand for corn had leveled off and the season average price fell to $3.70 and farmers became jittery that the New Plateau might be failing them.

In April 2016, with corn prices falling below $4.00 Irwin and Good wrote an article for farmdocdaily titled "The New Era of Corn and Soybean Prices Is Still Alive and Kicking" (https://tinyurl.com/y4sfraza).

They concluded that 2016 publication writing: "our position for some time has been that grain prices moved to a new era of higher average nominal prices beginning in late 2006. We re-compute our original projections using marketing year average prices and project new era averages [for the next 9 years based on various demand scenarios] of $4.35 and $10.44 per bushel for corn and soybeans, respectively…. Our most conservative scenarios project U.S. average corn and soybean prices of about $4 and $10 in the new era, and averages of $4.25 and $10.50 seem quite plausible. In sum, we conclude that the current period of relatively low corn and soybean prices reflects a combination of moderately high stocks-to-use ratios substantially influenced by good crop weather around the world and a weak demand environment, not a halt to the new era of higher average (nominal) grain prices."

Their work is another illustration of last week's assessment that Harwood and Daryll look at the same data as other ag economists (in this case Irwin and Good) and come to different conclusions. Harwood even uses some of the same basic analytical techniques as Good and Irwin, with the season average price serving as the dependent variable and the year-ending stocks-to-use ratio as the primary independent variable, in his regressions to develop a set of price determination equations.

In examining corn prices in the 1947-2015 period, Irwin and Good identify three different price periods: 1947-1972 with an average corn price of $1.28 per bushel, 1973-2005 with an average corn price of $2.36, and 2006-2015Forecast with an average corn price of $4.35.

Looking at the same data, Harwood takes a more nuanced approach coming up with 7 different price periods. For instance, Harwood identifies two periods between 1946 and 1972: 1946-1954 with an average corn price of $1.54, and 1955-1972 with an average price of $1.17.

In the 1946-1954 period, farmers fought hard to maintain the 90 percent of parity they had in the late WWII period. With Eisenhower's election and his appointment of Ezra Taft Benson as Secretary of Agriculture, we saw the beginning of a period of erosion in price supports and the average price difference between the two periods is clear.

In this period as in subsequent periods Harwood takes federal agricultural policy seriously and can identify the difference various policies have had on the relative level of crop prices. Irwin and Good do not mention federal agricultural policy in their analysis.

In his regression analysis Harwood uses the 1973-1997 period as the base period for his analysis. During that period the average price was $2.46 per bushel. The price initially jumped in the middle of the 1972 crop marketing year with the sudden entry of the Soviet Union in world crop markets. With a short initial period of booming exports, farmers were able to persuade Congress to increase the loan rate into the $2.00+ range, placing a floor under the move from the $1.00+ plateau to the $2.00+ plateau.

While crop loan rates began to decline after the adoption of the 1985 Farm Bill, they still remained near $2.00 until the adoption of the 1996 Farm Bill during the end of the 1995-1996 crop marketing year. From our perspective, it was the increase in loan rates into the $2.00+ price range that supported the 25 year long plateau of mostly above $2.00 corn prices.

Although Irwin and Good include 1998-2001 in their longer 1975 to 2005 price period, most farmers and analysts who lived through that period know that it bore no resemblance to the long period that preceded it. Harwood's regression analysis identifies 1998-2001 as a separate price period.

With the 1996 Farm Bill, federal agricultural policy moved away from from the non-recourse loan program to the marketing loan gain program (MLG though farmers refer to it as the LDP program) under which farmers could collect the difference between the lower market price and the loan rate (their MLG or LDP, depending on whether or not they took out a marketing loan) and retain ownership of their grain. In the 1998-2001 crop years, the average corn price was $1.90.

For price determination purposes, the critical policy difference was that excess grain was not segregated from the commercial market. As a result, government costs were higher because payments were made on every bushel produced and not just those put under loan and forfeited to the government as repayment for the loan and that doesn't even include the Emergency Payments.

In Harwood's analysis, 2002-2005 is also identified as a separate price period with an average price of $2.20.

While Irwin and Good postulate that the "new plateau" which began in 2006 will continue for 9 years beyond their 2016 article, Harwood's analysis shows a distinct break from the "new plateau" with the 2014 crop year when the corn price falls to $3.70. His analysis shows that the 2006-2013 period is characterized by two factors. The first is the adoption of the renewable fuels standard which triggered the building of ethanol plants that would increase the amount of corn being used for ethanol production from 2 billion bushels to 5.5 billion bushels in a relatively short period of time.

By 2009, it became clear that US corn farmers would be able to meet the new demand and the season average price fell to $3.55. At that point it looked as if the bloom was off the corn ethanol rose. But lower weather-related production levels in 2010 and 2011 triggered higher prices which peaked with the Midwest drought of 2012. With the return of higher production levels in 2013, the corn price declined by $2.43 to $4.46. During the 2006-2013 period the

average corn price was $4.70. For the current price period that began with the 2014 crop year, corn has averaged $3.48 per bushel.

As for the years ahead…with the prospect of roughly steady row-crop acreage but increasing yields and the continuation of current farm policy, the two of us expect season average corn prices to begin with a 2, except in years when yields are significantly depressed by weather.

Exports may occasionally come to the rescue, but usually they don't.

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