

The importance of USDA corn production forecasts

Andrew M McKenzie, Professor, Department of Agricultural Economics and Agribusiness,
University of Arkansas

There is growing concern among farmers and futures traders that USDA corn production forecasts can no longer be relied upon. The latest USDA forecast for this year's harvest of 12.7 billion bushels was released on October 8th and represented a 4% cut from the September forecast. On the back of this revision December delivery corn futures prices have climbed 13% over the last couple of weeks. Some analysts have argued the USDA should have been able to foresee the lower US corn supply earlier in the season. More accurate forecasts would avoid big "surprises" like the October forecast. Professor Andrew McKenzie, an expert in grain futures at the University of Arkansas, has analyzed the impact of USDA production forecasts on corn futures prices. His research – published in American Journal of Agricultural Economics (May 2008), pages 351-366 – highlights the importance of USDA forecasts to grain markets. He shows that when USDA production forecasts differ greatly – by 4% or more – from what the grain market expects, very large changes in futures prices will result. These shocks represent new information which the markets must then adjust to. The larger the shock the more prices have to adjust. McKenzie notes that volatile prices brought about by large USDA forecast revisions are a big problem for everyone who uses futures markets. Farmers rely on USDA forecasts to make hedging, production and marketing decisions. Analysts question whether the inaccuracies of this year's forecasts are a sign that the USDA needs to improve its forecasting methods. McKenzie's research reveals that on average the USDA has in the past done a good job of forecasting harvest corn production. Over the last 3 years USDA forecasts made as early as August have been very accurate, missing their target by only 1 – 2% on average. However, McKenzie notes that this year's forecast surprises are not unprecedented. His research points out that large corn production surprises, measured as the difference between USDA and private market forecasts released in August have occurred quite frequently over the last 40 years. For example, in 1974 USDA and private forecasts differed by 6.5% and as a result corn futures prices changed dramatically on release of the USDA numbers. McKenzie notes that USDA forecast revisions released in October are on average around 2%, and revisions of around 4% are not that unusual – so in his mind the current year numbers are not extraordinary. McKenzie believes that it would be difficult for USDA to significantly improve upon their forecasts and that based on historical evidence the size of this year's revisions are unlikely to be a persistent problem in future years. Having said that, McKenzie's research shows that futures price reactions are very sensitive to USDA induced shocks, and in the current environment of high priced and volatile commodity markets, inaccurate USDA production forecasts can result in very large price moves.