

May 4, 2009 Addendum to
“Review of Methodology for Determining Expected Market Price of Grain Sorghum in
the Federal Crop Insurance Program”
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The report, “Review of Methodology for Determining Expected Market Price of Grain Sorghum in the Federal Crop Insurance Program,” by Greg Pompelli was submitted to the Risk Management Agency (RMA) in response to Section 12009 of the Food, Conservation, and Energy Act of 2008 on April 6, 2009. The law required the Federal Crop Insurance Corporation “contract individually with 5 expert reviewers...to develop and recommend a methodology for determining an expected market price for sorghum for both the production and revenue-based plans of insurance to more accurately reflect the actual price at harvest.” This addendum summarizes the findings and recommendation in the report.

Based on a review of the commodity price forecasting literature, the April 6, 2009, report found the current RMA approach was reasonable given the length of time between price forecasts and actual events and did not recommend the development of an alternative forecasting methodology. The current RMA approach, which relies on corn futures market prices and season-average grain sorghum price projections, compares favorably with current approaches found in the economic literature. While the economics literature is filled with attempts to improve and refine forecasting approaches no single approach was found to be superior to all others in all cases. Data limitations, length of time horizons, and the inherent randomness of shocks in agricultural markets prevent the identification of a single superior model. Given the timing of RMA forecasts, the current commodity price forecasting literature does not support the selection of an alternative for RMA’s price forecast methodology.

The analysis using data from CashGrain Bids found the bid price correlation between corn and grain sorghum for all states from 2002 to 2008 (a total of 679543 observations) was positive very high. The correlation between the bid prices of corn and grain sorghum over this whole period was 0.978 (a value of 1.0 would have indicated perfect correlation). During that period corn prices averaged \$2.88 per bushel compared to grain sorghum prices at \$2.66 per bushel, roughly an average difference in prices of 21.6 cents per bushel. The resulting average annual ratio of grain sorghum bid prices to corn prices was 0.92. Using only October data, the average grain sorghum price bid between 2002 and 2008 was \$2.42 per bushel compared to the annual average of \$2.66 per bushel of corn. The average October ratio of grain sorghum to corn price bids at facilities that bid for both grains on the same day was 0.91, and the correlation between these corn and grain sorghum price bids was 0.92.

The apparent consistency of average results masks the great price variation present in major grain sorghum growing states. For example, using data from over 200 Kansas facilities in 2008, the report found price bids ranged from over \$4.10 per bushel to about

\$2.50 in October 2008. The range between high and low grain sorghum bids on any given day exceeded 50 cents per bushel. Similarly, bid data collected from over 120 Nebraska facilities during October 2008 ranged from over \$3.90 per bushel to almost \$2.50, and the intra-day grain sorghum bid ranges exceeded 30 cents per bushel.

Point of Clarification

Although not specifically stated in the April 6, 2009, report, the season-average grain sorghum price projections supplied by ERS are based on the market outlook developed by the World Agricultural Outlook Board (WAOB) in the World Agricultural Supply and Demand Estimates (WASDE) consensus process and may be adjusted based on additional information available from the USDA long-term projections process.

The publication entitled “Forecasting Feed Grains in a Changing Environment” by Bill Chambers explains the methodology and data used to initiate season-average price forecasts (<http://www.ers.usda.gov/publications/FDS/Jul04/fds04F01/fds04F01.pdf>). The initial estimates serve as starting points for monthly discussions in the WASDE process described at <http://www.usda.gov/oce/commodity/wasde/prepared.htm>. The data used in the WAOB process are publicly available in the ERS Feed Grains Database at <http://www.ers.usda.gov/Data/FeedGrains/> and the NASS Quick Stats database at http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp.

The 2007 *Farm Journal* article entitled “Under Lock and Key: Inside the security that safeguards USDA’s numbers” by Roger Bernard, also helps explain the WASDE process (http://www.nass.usda.gov/Newsroom/2007/UnderLockKey_reprint.pdf). The USDA Long-term projections process described on the ERS public website at <http://www.ers.usda.gov/Briefing/Baseline/process.htm> notes that information in the USDA long-term projections may not be released to the public until after the president’s proposed budget is released.