

Barley Pricing Methodology

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United States Department of Agriculture

Published April, 2011

Barley is traded on the Intercontinental Exchange (ICE), however recent trade volume has been insufficient for program purposes. Under the Common Crop Insurance Policy (COMBO), it is necessary to calculate a price in real time based on such exchanges. Risk Management Agency's (RMA) authority to derive this price is found in the Commodity Exchange Price Provisions (CEPP), informing stakeholders that the price will be based off another futures contract with a factor applied to it, "as determined by RMA." Beginning in 2012 crop year (CY), the factor will be the same for all sales closing dates and both projected and harvest prices for a given crop year. All three plans of insurance associated with the COMBO policy use the same methodology to determine a factor. Data are gathered from the National Agricultural Statistics Service (NASS) and Barchart.com.

Barley prices were compared to corresponding cash prices for corn and wheat from the Chicago Board of Trade (CBOT) and hard red wheat from the Minneapolis Grain Exchange (MGEX). The correlations of the three futures series to barley were calculated over various timeframes. Corn has the highest correlation over all timeframes analyzed and is the futures basis for barley (as reflected in the CEPP price discovery tables).

Feed Barley, All states and counties except Alaska

Various methods for calculating the factor were considered, however both in merits of the model and in consistency with other similar factors used in COMBO insurance products, a 10 year simple average of yearly data was established as the factor methodology for barley. Two price series are used to establish the relative values of barley and corn. The first is the NASS marketing year average price for feed barley. The second is the CBOT September corn contract (CU) price constructed to represent the value of corn for the COMBO product for a given year. CBOT September corn quotes from August 1st to August 31st are compiled for each year historically then averaged together in the same manner as prescribed by the CEPP. This timeframe represents the most common harvest period for barley in the CEPP, as well as the most common for the major barley producing states. For each year, the ratio between the feed barley price and CBOT corn price is calculated, and then the most recent 10 years of ratios are averaged together. This final calculation results in a factor. The factor is then applied to the discovered corn prices as instructed by the CEPP. The formula is expressed as:

$$\frac{\sum_{i=t_x-12}^{t_x-2} \frac{Barley_{NASS_i}}{Corn_{CBOT_i}}}{10} \times Corn_{CBOT_{t_x}} = Barley_{Combo} \quad (1)$$

Given the lag between the most recently reported marketing year average price for feed barley and the CBOT corn contract used to price the current insurance offer, the factor uses data from two years prior to the current offer as the most recent. For example, for the 2011 CY barley product, the factor is calculated with data from 2000 – 2009.

Feed Barley, Alaska only

Beginning with the 2003 CY, RMA has developed a separate price election for Alaska barley. This was done at the recommendation of the Spokane Regional Office and supported by the Alaska barley growers. NASS publishes annual Alaska and U.S. barley prices. A ratio between Alaska NASS and U.S. NASS barley prices is determined and the average of the yearly factors is calculated on a 5-year and 10-year basis. After a review of the time series, RMA determined that the 5-year average best represented Alaska barley prices. The 5-year Alaska to U.S. average ratio is then multiplied by the "Feed Barley, All states and counties except Alaska" factor for the given CY to establish the Alaska only factor. The Alaska only factor is then applied to the discovered corn prices as instructed by the CEPP.