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Weekly Outlook: Sorting Out the June 1 Corn Stocks Estimate

Darrel Good

Department of Agricultural and Consumer Economics
University of Illinois

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It is an understatement to say that last week's USDA estimate of June 1, 2011 corn stocks was a surprise to the market. At 3.67 billion bushels, the estimate was about 370 million bushels larger than the reported average trade guess.

Before examining the implications of the report, it is important to understand some of the basic methodology for making the stocks estimate. As spelled out in the Grain Stocks report, the estimate of quarterly stocks is based on separate surveys for off-farm and on-farm stocks. For off-farm stocks, the estimate is based on an enumeration of all known commercial facilities, currently totaling about 9,000. Reports are normally received from operations that represent about 90 percent of the off-farm storage capacity, with estimates made for non-respondents. The estimate of on-farm stocks is based on a probability survey that includes about 70,000 farm operators selected from a list of producers that assures all operations have a chance to be selected. Because the off-farm stocks estimate is based on an enumeration with a high response rate, the reliability of the estimate is very high. The on-farm stocks estimate is subject to sampling variability since not all operations are surveyed. The USDA indicates that there is a 95 percent chance that June 1 on-farm survey estimates for corn will be within 4.6 percent of the value that could be developed by averaging the estimates produced from all possible samples of the population. Both off-farm and on-farm survey results are subject to non-sampling errors, such as reporting and recording mistakes.

Part of the surprise in the June 1, 2011 corn stocks estimate resulted from an unrealistically low expectation. Based on our calculations, stocks at the expected level of 3.3 billion bushels would have implied feed and residual use during the third quarter of the 2010-11 marketing year of about 1.105 billion bushels. That rate of use would have been higher than indicated by the historical seasonal pattern of use and the magnitude of the livestock inventory this past spring. On the other hand, the June 1 stocks estimate of 3.67 billion bushels implies third quarter feed and residual use of 735 million bushels, a rate that is not consistent with the historical seasonal pattern and the rate of use during the first half of the year. [Note: The USDA's Economic Research Service will report estimates of third quarter corn consumption by category in the Feed Outlook report to be released on July 14.] As presented in this newsletter two weeks ago, a June 1 stocks estimate of about 3.455 billion bushels would have been consistent with both the historical seasonal pattern of feed and residual use and the rate of use during the first half of the year. The "surprise" component of the stocks estimate, then, was about 215 million

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bushels.

So where were the June 1 corn stocks located? Total inventories on June 1 were 56.3 percent as large as stocks held on March 1, 2011. For Iowa and Minnesota, June 1 stocks were 61 percent as large as March 1 stocks, while inventories in the rest of the country were only 52 percent as large. Of the total inventory on June 1, 54 percent was held in off-farm facilities. Off-farm stocks accounted for only 48 percent of the total on March 1. In Iowa, off-farm stocks declined by only 26.6 percent from March 1 to June 1. Off-farm stocks in the rest of the country declined by 39 percent. On-farm stocks on June 1 were 50 percent smaller than on March 1. Compared to March 1, then, a larger share of June 1 stocks were held in Iowa and Minnesota and a larger share was stored in off-farm facilities.

Taken at face value, the June 1 stocks estimate suggests that year-ending (September 1, 2011) stocks could be 200 million bushels or so larger than the most recent WASDE forecast of 730 million bushels. For the 2011-12 marketing year balance sheet, the increase is equivalent to an additional 1.25 million harvested acres of corn. The USDA's July WASDE report, to be released on July 12, will reflect revised expectations about 2010-11 marketing year consumption by category and the magnitude of year-ending stocks.

Ultimately, September 1, 2011 stocks will be reflected in the Grain Stocks report to be released on September 30. A year ago, the smaller-than-expected June 1 stocks estimate was followed by a larger-than-expected September 1 stocks estimate. Some believe the September 1, 2010 stocks estimate reflected the reporting of some newly harvested corn. However, that stocks estimate resulted in very logical estimates of corn consumption during the 2009-10 marketing year, seemingly "correcting" the small June 1 estimate. Last years' experience creates a bit more uncertainty about the September 1 stocks estimate this year and adds to the overall supply uncertainty stemming from acreage and yield uncertainty.