ANTICIPATING THE USDA’s MARCH 1 CORN STOCKS ESTIMATE

On March 28, the USDA will release an estimate of U.S. corn stocks as of March 1, 2013. That estimate is based on a survey of all commercial storage facilities and a large sample of farmers. The estimate will be used to gauge the pace of domestic feed and residual use of corn during the second quarter of the 2012-13 marketing year. In addition the magnitude of stocks on March 1 will reveal the supply of corn available for consumption during the last half of the marketing year and will serve as the basis for judging the pace of consumption as it unfolds over the next several months.

Forming an expectation for the magnitude of stocks on March 1 starts with the estimate of December 1, 2012 stocks of 8.03 billion bushels. To that is added the estimate of imports during the December-February quarter. Imports have been unusually large so far in the 2012-13 marketing year, with the Census Bureau estimating imports in the first quarter of the marketing year at 29 million bushels. Estimates for December and January totaled about 35 million bushels. Imports for the entire second quarter may have been near 50 million bushels, bringing total available supplies to 8.08 billion bushels.

The estimate of corn consumption during the quarter is subtracted from the estimate of total supply in order to forecast March 1 stocks. Corn is consumed in three categories: exports, domestic processing (mostly for ethanol and by-products), and feed and residual use. The USDA reported that export inspections during the second quarter of the marketing year totaled 155 million bushels. Census Bureau export estimates for December and January exceeded export inspection estimates by a total of 5 million bushels. If that margin persisted through February, exports during the quarter totaled about 160 million bushels, the smallest quarterly total in 42 years.

Based on weekly estimates from the U.S. Energy Information Agency, domestic ethanol production during the second quarter of the 2012-13 corn marketing year was 15 percent less than during the same quarter a year earlier. That level of production implies that about 1.11 billion bushels of corn were used to produce ethanol and by-products during the quarter. Other domestic processing uses of corn during the quarter
likely totaled about 325 million bushels. That estimate is consistent with the pace of use during the first quarter of the marketing year and with the USDA’s forecast for the entire year. Corn used for all domestic processing during the second quarter was likely near 1.435 billion bushels.

Forming expectations about feed and residual use of corn is more difficult than expectations for the other two categories. There are no on-going measures of feed use of corn. Consumption in this category is calculated as a residual, starting with total use during the quarter as implied by quarter-ending stocks, and then subtracting estimated use in the other two categories. As a result, there is considerable variation in quarterly estimates of feed and residual use of corn over time. On an annual basis, the USDA suggests that there is a positive correlation between crop size and residual consumption of corn which further complicates the formation of expectations. For any particular quarter, forecasts of consumption prior to the release of the stocks estimate is based on a combination of the implied rate of consumption in the previous quarter, the level of livestock production and inventories, and consideration of the use of other feed ingredients.

For the 2012-13 marketing year, the estimate of feed and residual use during the first quarter of the year may be overstated since large quantities of 2012 corn were harvested and presumably used before the start of the marketing year on September 1. Conversely, the estimate of use during the fourth quarter of the 2011-12 marketing year was likely underestimated for the same reason. To gauge the pace of recent consumption we have looked at combined consumption in the last quarter of the previous marketing year and the first quarter of the current marketing year. Implied feed and residual use of corn during those two quarters was nearly five percent larger than in the same two quarters in the previous year. Looking broadly since November 2012, dairy cow numbers have been about equal to those of a year ago, broiler chick placements have been modestly larger than those of last year, cattle-on-feed numbers have been down about six percent, and hog numbers have been about equal those of a year ago.

Feed and residual use of corn during the second quarter near the level of the past two years would not be surprising. If use in that category was near 1.55 billion bushels, total use would have been near 3.145 billion bushels leaving March 1 stocks near 4.935 billion bushels. Stocks at that level would be the smallest in 15 years. Market reaction to the stocks estimate will hinge on the size of the deviation from average trade expectations.

Issued by Darrel Good
Agricultural Economist
University of Illinois