Weekly Outlook: Corn and Soybean Production Prospects

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The 2011-12 corn and soybean marketing year officially begins on September 1. As pointed out last week, the 2010-11 marketing year is ending with a slowdown in the consumption of both corn and soybeans, suggesting that year ending stocks could be larger than projected in the USDA’s July WASDE report. Those stocks will not be known until September 30 and the estimates in the September Grain Stocks report often deviate from expected levels. The USDA will release updated forecasts of 2010-11 marketing year consumption and ending stocks on August 11.

The 2010-11 marketing year is also ending under a cloud of poor economic and financial news that raises concern about demand for corn and soybeans in the feed, energy, and export markets during the year ahead. The strength of demand determines the quantity of corn and soybeans that will be consumed and the price end users are willing to pay. In the near term, however, the size of the 2011 U.S. corn and soybean crops will be most important for prices. Large crops in combination with weakening demand would allow prices to drift lower. On the other hand, small crops might require higher prices to limit consumption even under a weakening demand scenario.

The USDA will release the first survey based forecast of the size of the 2011 U.S. corn and soybean crops on August 11. Those forecasts will reflect information collected in the Agricultural Yield Survey (AYS) of producers and in the Objective Yield Survey (OYS). For the AYS, about 27,000 producers in 32 states for corn and 29 states for soybeans were surveyed around the first week of August and asked to estimate the number of acres to be harvested and to forecast the final yield of each crop. For the OYS, USDA enumerators made plant counts and measurements in 1,920 corn fields in 10 states and 1,835 soybean fields in 11 states in order to forecast final yield. The August corn and soybean production forecasts will be based on the combined yield and harvested acreage forecasts from the two surveys. For a more complete description of the data collection and yield forecasting methodology used by the USDA, see our report here.

The reliability of the USDA production forecasts increases during the forecast cycle from August through November. The USDA’s August 2010 Crop Production report indicated that the chances were two out of three that the August corn production forecast would not be above or below the final estimate by more than 6 percent and a 90 percent chance that the difference would not exceed 10.3 percent. The 2010 August forecast was 7.4 percent larger than the final estimate. For soybeans, the USDA indicated a two
out of three chance that the August forecast would not be above or below the final estimate by more than 6.6 percent and a 90 percent chance that the difference would not exceed 11.5 percent. The August 2010 forecast was 3.1 percent larger than the final estimate.

In early August last year, the market was generally expecting record or near record U.S. average corn and soybean yields. The 2010 U.S. average corn yield was 11.9 bushels (7.2 percent) below the record yield of 2009. The 2010 U.S. average soybean yield was only 0.5 bushel (1.1 percent) below the record yield of 2009. This year, analysts are generally anticipating a U.S. average corn yield below trend value due to adverse planting and growing conditions in many parts of the country and extremely high temperatures in July. Expectations for the final yield forecast are generally in the low 150 bushel range. Yield expectations are more bunched for soybeans, recognizing the importance of August weather. Expectations for the final estimate tend to be in the 41 to 44 bushel range. Our examination of other years since 1975 with July weather conditions similar to 2011 results in a corn yield expectation in the 150 to 154 bushel range and a soybean yield expectation in the 41 to 43 bushel range. See details here.

Assuming that September 1, 2011 stocks of corn are about 50 million bushels larger than the current projection of 880 million bushels, that demand weakness results in 2011-12 marketing year consumption about 150 million bushels less than the current USDA projection of 13.5 billion bushels, and that minimum marketing-year ending stocks are 5 percent of consumption, the 2011 crop needs to be 13.085 billion bushels or larger in order to avoid the need for higher prices to curtail consumption. Based on the current forecast of 84.9 million acres harvested for grain, these assumptions imply a need for the average yield to be above 154 bushels.

For soybeans, September 1 stocks 40 million bushels above the current forecast of 200 million bushels and consumption 100 million less than the current forecast of 3.264 billion bushels implies the need for a 2011 crop of at least 3.08 billion bushels. Based on the current forecast of harvested acreage near 74.3 million, a crop of that size implies a need for the average yield to be above 41.5 bushels.