



Weekly Outlook: Anticipating the March 1 Soybean Stocks Estimate

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On March 31, the USDA will release the quarterly *Grain Stocks* report, with estimates of crop inventories as of March 1, and the annual *Prospective Plantings* report. For soybeans, the stocks estimate is typically overshadowed by the estimate of planting intentions. Usually, the quarterly stocks estimates for corn garners more interest because these reports reveal the pace of feed and residual use which is a large component of total corn consumption. The March 1 soybean stocks estimate this year may not provide much new information despite recent growth in marketing year ending stocks and concerns about the size of the South American crop.

Anticipating the size of the March 1 stocks estimate begins with the USDA estimate of stocks held on December 1, 2016. By including an estimate of soybean imports during the quarter, an estimate of the total supply available during the quarter can be calculated. An estimate of consumption from December through February is subtracted from that total to estimate stocks on March 1. Soybean crush, exports and seed, feed, and residual use, comprise the three consumption categories. Estimates of soybean stocks on December 1 equaled 2.895 billion bushels. Census Bureau estimates of imports in December and January totaled 4.4 million bushels, so the total for the quarter may be around 7 million bushels, resulting in a total supply of 2.902 billion bushels.

The expected level of soybean crush on March 1 is calculated based on estimates of the domestic crush during the second quarter of the marketing year. The USDA's [Oilseed Crushings, Production, Consumption and Stocks](#) report provides estimates of the domestic crush for December 2016 and January 2017. The estimate for February will be released on April 3. The National Oilseed Processors Association (NOPA) estimate of the February soybean crush by its members can be used to estimate the total February crush. For the current marketing year, the USDA monthly crush estimates exceeded the NOPA crush estimates by 6.4 percent. A continuation of the margin for USDA monthly crush estimates above the NOPA February crush estimate indicates a second quarter crush of 491 million bushels of soybeans. The total crush for the first half of the marketing year sums to 976 million bushels.

Soybean export calculations for the second quarter are inferred from USDA weekly export inspection reports and Census Bureau export estimates. The USDA's weekly export inspections report shows that cumulative 2016-17 marketing year inspections attained 1.619 billion bushels by the end of the second quarter. Through the first five months of the year, cumulative Census export estimates exceeded

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inspections by 30 million bushels. If that margin persisted through February, cumulative exports reached 1.654 billion bushels by mid-year. Exports during the first quarter totaled 932.5 million bushels, putting second quarter exports at 721.5 million bushels.

Calculating the level of seed, feed, and residual use of soybeans during the second quarter of the year is difficult. Due to the Census Bureau ending monthly estimates of domestic soybean crush in July 2011 and the USDA not resuming the monthly crush estimate until May 2015, a gap occurred in calculating seed, feed, and residual use that relied on monthly NOPA estimates. These historical estimates could deviate from complete monthly crush estimates. Despite this issue, the seasonal pattern of seed, feed, and residual use is noticeable. Use is positive in the first half of the year and negative in the last half of the year, but the quarterly distribution varies from year to year. Use in the first quarter this year was estimated at 196.4 million bushels based on the December 1, 2016 stocks estimate. In the five years preceding this marketing year, disappearance in this category during the first half of the year averaged about 171 percent of the marketing year total. If the pattern continues this year and the USDA's projection of 128 million bushels for the year is correct, second quarter disappearance would be 22.5 million bushels.

Total consumption of soybeans during the second quarter of the marketing year is calculated to be near 1.235 billion bushels. With stocks at the start of the quarter of 2.895 billion bushels and imports during the quarter of 7.4 million bushels, March 1 stocks are calculated to total about 1.68 billion bushels. Given the uncertainty of the magnitude of feed, seed, and residual use during the quarter, the stocks estimate would be expected to be within a relatively narrow range.

If year ending stocks remain at the current USDA estimate of 435 million bushels and the estimate of March 1 stocks is near the calculation presented here, consumption of U.S. soybeans during the last half of the marketing year would be around 1.23 billion bushels. The USDA's estimate of March 1 stocks will provide the basis for evaluating the pace of consumption over the next few months. That estimate, along with the estimate of planting intentions to be released on the same day will set the tone for soybean prices into the planting and growing season.

References

USDA, National Agricultural Statistics Service. *Oilseed Crushings, Production, Consumption and Stocks*
<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1902>