



Weekly Outlook: Any Information in Mid-Year 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, as well as the annual *Prospective Plantings* report. For soybeans, the stocks estimate is typically overshadowed by the estimate of planting intentions.

For soybeans, the stocks estimate is often very near the level expected by the market since the magnitude of the domestic crush and exports in the previous quarter are known with a high level of certainty. The stocks estimate, then, reveals the magnitude of seed, feed, and residual use of soybeans in the previous quarter. Unlike corn, for which feed and residual use is a large portion of disappearance, seed, feed, and residual use of soybeans is a relatively small portion of disappearance during the winter quarter. Occasionally, however, the March 1 stocks estimate provides a market surprise. Based on the average trade guess reported by news services, the March 1 stocks estimate has deviated from market expectations by more than 30 million bushels nine times and by more than 60 million bushels four times in the past 25 years.

The expected level of soybean stocks on March 1 this year can be calculated based on estimates of the domestic crush and exports during the second quarter of the marketing year (December 2015-February 2016). The USDA's [Oilseed Crushings, Production, Consumption and Stocks](#) report provides estimates of the magnitude of the domestic crush for December 2015 and January 2016. The estimate for February will be released on April 1. The National Oilseed Processors Association (NOPA) estimate of the magnitude of the February soybean crush by its members can be used to estimate the total February crush. For the nine months that USDA has provided soybean crush estimates (May 2015-January 2016), the USDA crush estimates have exceeded the NOPA crush estimates by 6.4 percent. Applying that ratio to the NOPA February crush estimate, suggests that 483.1 million bushels of soybeans were crushed in the second quarter of the current marketing year.

The USDA's weekly export inspections report shows that cumulative 2015-16 marketing year inspections had reached 1.437 billion bushels by the end of the second quarter. Through the first five months of the

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year, cumulative Census export estimates exceeded inspections by 32 million bushels. If that margin persisted through February, cumulative exports had reached 1.469 billion bushels by mid-year. Exports during the first quarter totaled 791.6 million bushels, putting second quarter exports at 677.4 million bushels.

Anticipating the level of seed, feed, and residual use of soybeans during the second quarter of the year is challenging. The Census Bureau discontinued its monthly estimates of the domestic crush in July 2011 and the USDA has provided monthly estimates beginning in May 2015. From the last quarter of the 2010-11 marketing year through the first three quarters of the 2014-15 marketing year, quarterly estimates of seed, feed, and residual use are estimated based on monthly NOPA crush estimates. Those estimates may deviate from estimates that would have been based on more complete estimates of the size of the crush. Still, the seasonal pattern of seed, feed, and residual use is well known. 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 150.3 million bushels based on the December 1, 2015 stocks estimate. In the five years prior to the 2010-11 marketing year, disappearance in this category during the first half of the year averaged about 125 percent of the marketing year total. If that pattern is followed this year, and the USDA's projection of 130 million bushels for the year is correct, second quarter disappearance would have been 12.2 million bushels.

Total consumption of soybeans during the second quarter of the marketing year is calculated to be near 1.173 billion bushels. With stocks at the start of the quarter of 2.715 billion bushels and imports during the quarter of eight million bushels, March 1 stocks are calculated to total about 1.55 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 of 1.55 billion bushels.

If the March 1 stocks estimate is surprisingly large or small, the accuracy of USDA's 2015 production estimate may be called into question. The USDA has revised the previous year's production estimate by varying amounts in 20 of the past 25 years based on the stocks estimate at the end of the marketing year (September 1). However, it would be pre-mature to question the accuracy of the production estimate based on the March 1 stocks estimate due to the large variation in the quarterly pattern of seed, feed, and residual use of soybeans. The eight largest revisions in the production estimates following the USDA's September 1 stocks estimate ranged from 1.1 to 3.5 percent. Only three of those eight large revisions followed a surprise in the March 1 stocks estimate that exceeded 30 million bushels. Conversely, of the nine years in which the magnitude of the surprise in March 1 stocks estimate exceeded 30 million bushels, only three were followed by revisions in the production estimate that exceeded one percent.

References

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