



U.S. Soybean Production Prospects for 2015

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Stocks of U.S. soybeans at the end of the current marketing year are expected to be at an eight year high. In addition, the current South American soybean harvest is estimated at a record 6.066 billion bushels, 378 million bushels larger than the 2014 harvest and 710 million bushels larger than the 2013 harvest. The USDA projects September 1, 2015 stocks of soybeans in South America at 2.205 billion bushels, 523 million bushels more than the inventory of the previous year.

Soybean prices have remained relatively high in the face of such large U.S. and world soybean supplies, with the un-weighted average price received by U.S. producers during the first five months of the 2014-15 marketing year likely near \$10.25 per bushel. However, prices have declined by \$0.50 to \$0.60 per bushel over the past month. Increasingly, soybean prices will take direction from the prospective size of the 2015 U.S. crop and the prospects for stocks at the end of the 2015-16 marketing year. Expectations about the size of U.S. crop begin with expectations about planted acreage. U.S. soybean plantings were at a record 83.701 million acres in 2014, 6.861 million more than planted in 2013 and 8.655 million more than planted in 2011. Expectations for 2015 are in a wide range. The USDA's baseline projections show acreage unchanged from last year. Congressional Budget Office (CBO) projections released last month point to planted acreage of 86 million acres. Other private estimates are as high as 88 million acres. Those expecting a large increase in soybean acreage point to the large reduction in soft red winter wheat acreage that frees up additional acreage for spring-planted crops. In addition, the lower cost of producing soybeans relative to corn and the perceived price advantage of soybeans relative to corn have fueled expectations of a further acreage shift from corn to soybeans. The price advantage of soybeans relative to corn, however, has faded over the past month as the ratio of November soybean futures to December corn futures has declined from 2.4 to 2.33.

Given the large increase in soybean acreage over the past three years, a more modest increase might be expected this year if crop prices remain near current levels. Planted acreage near 85.5 million seems a reasonable expectation. The USDA will survey producer planting intentions next month and release an estimate of those intentions in the March 31 *Prospective Plantings* report. Since the beginning of the "freedom to farm" era in 1996, planting intentions reported in March have provided an unbiased forecast of actual plantings. Over the 19 year period from 1996 through 2014 actual acreage exceeded intentions in 10 years and was less than intentions in nine years. On average, actual plantings exceeded intentions by 98 thousand acres. However, the difference (some negative and some positive) exceeded a million acres in

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nine years, two million acres in 4 years, and three million acres once. The June USDA *Acreage* report will provide a clearer picture of soybean acreage.

Since 1996, the difference between planted and harvested acreage of soybeans ranged from 595 thousand to 1.858 million acres and averaged 1.095 million acres. The difference was large in years of widespread drought and small in years with generally favorable conditions. A combination of record planted acreage and normal weather might lead to abandonment of about 900 thousand acres in 2015. Planted acreage of 85.5 million acres, then, would point to harvested acreage of about 84.6 million acres.

Yield expectations for 2015 are generally based on an analysis of trend yield. We calculate a linear trend of actual yields from 1960 through 2014. That trend explains 88 percent of the variation in actual yields over that 55 year period and indicates an increase in the average U.S. yield of 0.4 bushels per acre per year. The trend yield calculation for 2015 is 44.4 bushels per acre. As indicated in the discussion of corn yields last week, the trend yield may understate expected yield under average growing season weather conditions. Average weather in 2015 might point to an average yield near 45 bushels per acre. That is equal the CBO baseline projection and one bushel less than the USDA baseline projection. Yield at that level would point to a 2015 crop of 3.807 billion bushels, 162 million bushels smaller than the 2014 crop.

A crop of 3.807 billion bushels, along with stocks of soybeans at the beginning of the 2015-16 marketing year at the current USDA projection of 385 million bushels and imports of 15 million bushels, point to a marketing year supply of 4.207 billion bushels, 121 million bushels larger than the supply for the current year. To prevent a further increase in year ending stocks next year, that level of supply would require consumption of U.S soybeans to exceed 3.822 billion bushels, 121 million bushels larger than the projection for the current year. Such a large increase appears unlikely.

Compared with the current marketing year, expectations for the 2015-16 soybean marketing year include increased acreage, a further increase in year-ending stocks, and lower prices. The expected price decline is moderated by the likelihood that stocks at the end of the current marketing year will be about 90 million bushels less than projected last fall. That is equivalent to two million acres. Prices are not expected to be as low as the CBO baseline projection of \$8.19 or even the USDA baseline projection of \$8.50. The futures market currently points to a marketing year average near \$9.50.

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