**2017 Gross Revenue Scenarios for Soybeans**

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Soybean production margins have been tight since 2014 and are likely to remain tight in 2017. In this environment, it is natural to think about possible gross revenues for soybeans in 2017. Gross revenue scenarios can help develop marketing and cash flow strategies.

To examine 2017 gross revenues for soybeans, we have developed a case farm for west central Indiana that follows a typical corn/soybean crop rotation. This case farm has a 2017 trend soybean yield of 55.1 bushels per acre. The following information was used to examine market revenue for soybeans: trend-adjusted historical yields; 2017 projected price used for crop insurance adjusted for basis ($9.80 per bushel); and the ratio of historical harvest to projected prices. Essentially, a gross return was computed given the weather conditions in each of the last 30 years. Soybean revenue for each scenario was computed by multiplying trend-adjusted yield by expected harvest price (harvest price/projected price multiplied by $9.80). Expected crop insurance indemnity payments and government payments were then added to market revenue to obtain the gross revenue for each of possible 30 scenarios.

Figures 1 and 2 illustrate the ratio of harvest to projected crop insurance prices and the ratio of actual to trend-adjusted yields in west central Indiana. A ratio of 1 in Figure 1 signifies that the harvest crop insurance price was the same as the projected crop insurance price. Similarly, a ratio of 1 in Figure 2 signifies that actual yield was the same as trend-adjusted yield. Note that in some years, the harvest crop insurance price is considerably different than the projected price. In 9 of the 30 years, the harvest price was more than 10 percent higher than the projected price. Similarly, in 9 of the 30 years the harvest price was more than 10 percent lower than the projected price. Harvest price was greater than 20 percent below (above) projected price in 1989, 2004, and 2008 (1988, 2002, 2003, 2007, 2010, and 2012). In 3 (3) of the 30 years, actual yield was 10 percent higher (lower) than trend-adjusted yield. The wide variations in price and yield increase the difficulty associated with forecasting market revenue and gross revenue.

The average market and gross revenue for the 30 gross revenue scenarios was $540 and $573 per acre, respectively. This average gross revenue is approximately $100 lower than that obtained in 2016, and approximately $13 per acre below the average gross revenue for soybeans from 2007 to 2013.

The 30 possible gross revenue scenarios were divided into three categories: low revenue scenarios, middle revenue scenarios, and high revenue scenarios. Each of these categories contained one-third of the possible scenarios. The average market and gross revenue per acre for the low revenue scenarios was $465 and $494, respectively. The average market and gross revenue per acre for the high revenue scenarios was $632 and $663, respectively.

Next, we will compare gross revenue to production costs. For the low revenue scenarios, average net loss per acre would be approximately $87 per acre (losses would range from $48 to $130 for these scenarios). In contrast, average earnings of $82 per acre would be possible if the high revenue scenarios play out. Obviously, given historical ratios of harvest to projected crop insurance prices and actual to trend-adjusted yields, there is considerable uncertainty with respect to gross revenue for soybeans.

This article focused on gross revenues for soybeans. Detailed production cost data are also available. The 2017 Purdue Crop Cost and Return Guide, which is available as a free download from the Purdue Center for Commercial Agriculture website, gives estimated costs for producing corn, soybeans, and wheat in Indiana. This guide is updated frequently to reflect changes in expected input and crop prices.

 

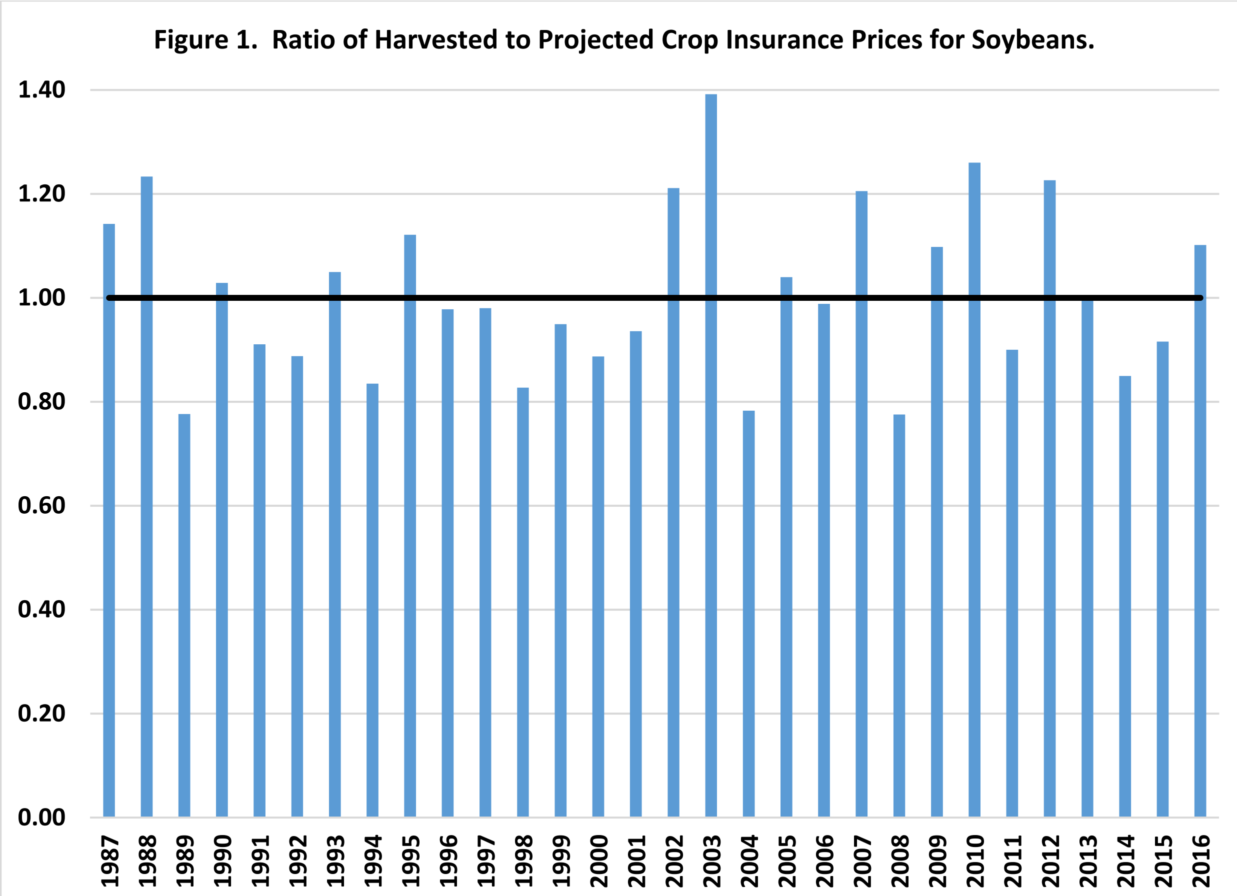
Figure 1. Ratio of Harvested to Projected Crop Insurance Prices for Soybeans.
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
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**Figure 2. Ratio of Actual to Trend-Adjusted Soybean Yields, West Central Indiana.**