

Department of Agricultural and Consumer Economics, University of Illinois Urbana-Champaign

Expectations for Corn and Soybean Prices over the Next Five Years

Gary Schnitkey and Todd Hubbs

Department of Agricultural and Consumer Economics University of Illinois

October 17, 2017

farmdoc daily (7):190

Recommended citation format: Schnitkey, G. and T. Hubbs. "Expectations for Corn and Soybean Prices over the Next Five Years." *farmdoc daily* (7):190, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 17, 2017.

Permalink: http://farmdocdaily.illinois.edu/2017/10/expectations-for-corn-and-soybean-prices.html

Many farm decisions are aided by having longer-run projections of corn and soybean prices. For example, determining the appropriate level of cash rents is aided by price projections. In this article, several longer-termed projections are presented. For the 2017 marketing year, these sources suggest that a corn price below or near \$3.50 is appropriate to use in budgets. The sources suggest that prices near or above \$3.50 are realistic for the 2018 and 2019 marketing years. For soybeans, the projections suggest a price in the low to mid-\$9 range for the 2017 marketing year. Using mid to high-\$9 prices in the 2018 and 2019 marketing years appear realistic.

Corn and Soybean Prices from 2011 to 2016

Market Year Average (MYA) prices for corn and soybeans are calculated by the National Agricultural Statistical Service (NASS), an agency within the U.S. Department of Agriculture (USDA). These prices represent averages over the U.S. for a marketing year. For corn and soybeans, the marketing year begins in September and ends in August. Marketing years cross calendar years. For example, the 2016 market year began in September 2016 and ended in August 2017. Often the market year is denoted by two years. The 2016 market year would be denoted as 2016/2017.

Prices were much higher in 2011, 2012, and 2013 than in the three later years of 2014, 2015, and 2016 (see Table 1). Corn prices were \$6.22 per bushel in 2011, \$6.89 in 2012, and \$4.46 in 2013. The average MYA corn price from 2011 to 2013 was \$5.56. Corn prices were \$3.70, \$3.61, and \$3.36 in 2014 through 2016, respectively, resulting in an average of \$3.56 per bushel from 2014 to 2016. Corn prices averaged \$2.30 per bushel higher from 2011 to 2013 as compared to the later time frame from 2014 to 2016. Soybean prices averaged \$13.30 per bushel from 2011 to 2013, \$3.79 per bushel higher than the \$9.51 per bushel average in 2014 to 2016.

Projected Prices for 2017 to 2021

Projections for the next five years are shown in Table 2 for both corn and soybeans. Projection sources include:

• USDA Agricultural Outlook gives projections released by the USDA in February near the time of the Agricultural Outlook conference. These projections have corn prices at \$3.30 for the 2017 marketing year, increasing to \$3.50 in 2021.

We request all readers, electronic media and others follow our citation guidelines when re-posting articles from farmdoc daily. Guidelines are available <u>here</u>. The farmdoc daily website falls under University of Illinois copyright and intellectual property rights. For a detailed statement, please see the University of Illinois Copyright Information and Policies <u>here</u>.

- CBO Baseline are used by the Congressional Budget Office (CBO) in making farm program payment estimates. These were released in June 2017. CBO projects a \$3.40 corn price in 2017, rising to \$3.93 per bushel in 2012.
- FAPRI provides projections of agricultural markets and farm program spending. There most recent estimates were released in August 2017. For corn, FAPRI projects a \$3.48 per bushel price for 2017, rising to \$3.75 per bushel in 2021.

| | | 20 | 011-2016 | | | | | | | |
|----------|---------------------|-------|----------|-------|-------|-------|--|--|--|--|
| | Market Year Average | | | | | | | | | |
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | | | |
| | \$/bu | \$/bu | \$/bu | \$/bu | \$/bu | \$/bu | | | | |
| Corn | 6.22 | 6.89 | 4.46 | 3.70 | 3.61 | 3.36 | | | | |
| Soybeans | 12.50 | 14.40 | 13.00 | 10.10 | 8.95 | 9.47 | | | | |

Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Quick Stats Database (https://www.nass.usda.gov/Quick_Stats/index.php).

Also shown in Table 1 is a WASDE projection of \$3.20 for the 2017 marketing year. This estimate comes from the October report of World Agricultural Supply and Demand Estimates (WASDE) and represents the midpoint of their marketing year range. These reports are released on a monthly basis by the Office of the Chief Economist and provide their most recent forecasts of market year average prices.

Finally, there is a CME futures price shown in Table 1. These represent projections based on Chicago Mercantile Exchange (CME) futures contracts. Price projections are \$3.35 for 2017, \$3.76 in 2018, and \$3.89 in 2019.

These corn price forecasts are quite consistent:

- 2017: All sources suggest a marketing year average price below \$3.50 per bushel with a range from \$3.20 (WASDE) to \$3.48 (FAPRI).
- 2018: Sources suggest a mid-\$3 corn price with projection ranging from \$3.35 (USDA Agricultural Outlook) to \$3.76 (CME Futures).
- 2019: Sources suggest a corn price in the mid to high \$3 range with a low of \$3.35 per bushel (USDA Agricultural Outlook) to a high of \$3.89 (CME futures).

These projections suggest corn prices below \$3.50 for 2017. Somewhat higher prices are projected for 2018 and 2019 by several of the sources. None of these sources, however, are projecting market year average prices above \$4 per bushel.

Soybean price forecasts fall within relatively narrow ranges as well:

- 2017: Sources range from a low of \$9.07 (USDA Agricultural Outlook) to a high of \$9.87 (CME Futures).
- 2018: Sources range from a low of \$9.40 (USDA Agricultural Outlook) to a high of \$9.82 (FAPRI).
- 2019: Sources range from a low of \$9.40 (USDA Agricultural Outlook) to a high of \$9.76 (FAPRI).

Using prices in the mid-\$9 range are consistent with the above sources for the next three marketing years.

Commentary

From the 2014 marketing year to the 2016 marketing year, corn prices averaged near \$3.50 and soybean prices averaged near \$9.50. Projections presented above suggest a continuation of roughly these price levels into the foreseeable future. Making decisions with prices in these levels seem prudent. For example, cash rental decisions should be made with the expectation of mid-\$3 corn prices and mid-\$9 soybean prices. Basing cash rents on higher prices could place farmers in financial stress.

History indicates actual prices can vary considerably from forecasted prices like those shown in Table 2 (see Irwin and Good, *farmdoc daily*, January 14, 2015 for comparison of forecasts to actual prices). All long-run forecasts make assumptions about yield, production, and demand conditions. A number of events could cause conditions to vary leading to higher prices. For example, widespread production shortfalls from weather events could result in much higher prices than the averages shown in Table 2. Alternatively, events could lead to lower prices. For example, prices could decline if the U.S. pulls out of the NAFTA free trade agreement between the U.S., Canada, and Mexico (see Burak, Baylis, and Coppess, *farmdoc daily*, October 4, 2017 for a discussion of trade disputes).

| | Market Year Average | | | | | | |
|--|---------------------|-------|-------|-------|-------|--|--|
| | 2017 | 2018 | 2019 | 2020 | 2021 | | |
| Corn | \$/bu | \$/bu | \$/bu | \$/bu | \$/bu | | |
| USDA Agricultural Outlook ¹ | 3.30 | 3.35 | 3.35 | 3.45 | 3.50 | | |
| CBO Baseline ² | 3.40 | 3.59 | 3.73 | 3.96 | 3.93 | | |
| FAPRI ³ | 3.48 | 3.64 | 3.80 | 3.79 | 3.75 | | |
| WASDE ⁴ | 3.20 | | | | | | |
| CME Futures ⁵ | 3.35 | 3.76 | 3.89 | | | | |
| Soybeans | \$/bu | \$/bu | \$/bu | \$/bu | \$/bu | | |
| USDA Agricultural Outlook ¹ | 9.35 | 9.40 | 9.40 | 9.45 | 9.45 | | |
| CBO Baseline ² | 9.30 | 9.53 | 9.67 | 9.84 | 9.87 | | |
| FAPRI ³ | 9.07 | 9.82 | 9.76 | 9.85 | 9.71 | | |
| WASDE ⁴ | 9.20 | | | | | | |
| CME Futures ⁵ | 9.87 | 9.76 | 9.72 | | | | |

¹ U.S. Department of Agriculture. Office of Chief Economist. *USDA Agricultural Projections to 2026.* Interagency Agricultural Projections Committee. Long-term Projections Report OCE-2017-1, February 2017.

² Congressional Budget Office. CBO's June 2017 for Farm Programs . June 29, 2017.

³ Food & Agricultural Policy Research Institute. University of Missouri. *Baseline Update for U.S Agricultural Markets*. FAPRI-MU Report #03-17. August 2017.

⁴ U.S. Department of Agriculture. Office of Chief Economist. *World Agricultural Supply and Demand Estimates.* WASDE-570. October 12, 2017.

⁵ Chicago Mercantile Exchange settlement prices on October 13, 2017 adjusted for basis. For corn, the settlement prices for December, March, and May contracts are averaged and a \$.30 per bushel basis is subtracted. For soybeans, the settlement prices for November, January, March, and May contracts are averaged and a \$.30 per bushel basis is subtracted.

....

Still, however, it does not seem reasonable to use price forecasts that are not in the mid-\$3 range for corn and mid-\$9 range for soybeans. Obviously, corn and soybean prices will vary from these projected levels sometime in the future. The events leading to those changes are unpredictable at this point in time.

References

Burak, S., K. Baylis, and J. Coppess. "US Agriculture Often Bears the Cost of Trade Disputes." *farmdoc daily* (7):181, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 4, 2017.

Congressional Budget Office. *CBO's June 2017 for Farm Programs*. June 29, 2017. https://www.cbo.gov/sites/default/files/recurringdata/51317-2017-06-usda.pdf

Food & Agricultural Policy Research Institute. University of Missouri. *Baseline Update for U.S Agricultural Markets*. FAPRI-MU Report #03-17. August 2017. https://www.fapri.missouri.edu/wp-content/uploads/2017/08/Baseline-Update.pdf

Irwin, S. and D. Good. "Long-Term Corn Price Forecasts and the Farm Bill Program Choice." *farmdoc daily* (5):7, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 14, 2015.

U.S. Department of Agriculture. Office of Chief Economist. *USDA Agricultural Projections to 2026*. Interagency Agricultural Projections Committee. Long-term Projections Report OCE-2017-1, February 2017. https://www.usda.gov/oce/commodity/projections/USDA_Agricultural_Projections_to_2026.pdf

U.S. Department of Agriculture. Office of Chief Economist. *World Agricultural Supply and Demand Estimates*. WASDE-570. October 12, 2017. http://usda.mannlib.cornell.edu/usda/waob/wasde//2010s/2017/wasde-10-12-2017.pdf