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Projected and Harvest Prices in 2017

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Harvest prices are key variables for determining payments on crop insurance contracts. In Midwestern states, 2017 harvest prices are $3.49 per bushel for corn and $9.75 per bushel for soybeans. Both the corn and soybean harvest prices are below projected prices, which is typical for years when U.S. yields are above trend yields.

2017 Projected and Harvest Prices

For corn and soybeans in the Midwest states, projected and harvest prices are based on settlement prices of Chicago Mercantile Exchange (CME) contracts. Projected prices are average settlement prices during February while harvest prices are averages of October settlements. The December CME contract is used for corn and the November CME contract is used for soybeans. Projected prices are used to set minimum revenue guarantees. For Revenue Protection (RP) policies, harvest prices reset guarantees when above projected prices. Harvest prices also are used to calculate revenue. Insurance payments occur when revenue is less than guarantees.

Table 1. Projected and Harvest Prices for Corn and Soybeans, Midwest States, 2012 to 2017

	Corn			Soybeans		
Year	Projected Price	Harvest Price	Change	Projected Price	Harvest Price	Change
	$/bu.	$/bu.	$/bu.	$/bu.	$/bu.	$/bu.
2012	5.68	7.50	1.82	12.55	15.39	2.84
2013	5.65	4.39	-1.26	12.87	12.87	0.00
2014	4.62	3.49	-1.13	11.36	9.65	-1.71
2015	4.15	3.83	-0.32	9.73	8.91	-0.82
2016	3.86	3.49	-0.37	8.85	9.75	0.90
2017	3.96	3.49	-0.47	10.19	9.75	-0.44

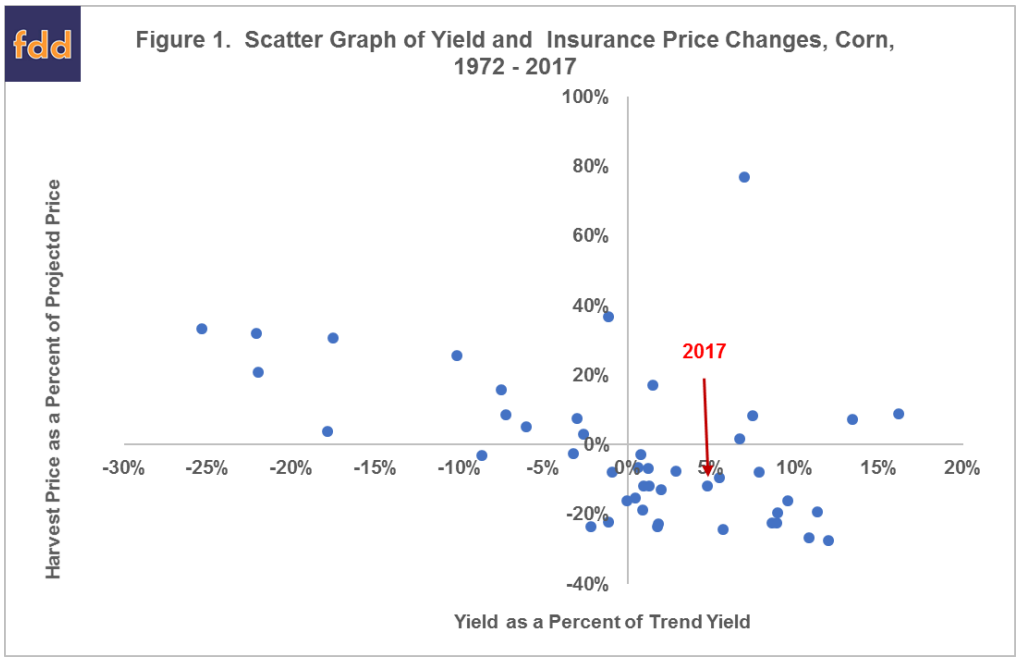
Source: Risk Management Agency, USDA

The projected price for corn in 2017 is $3.96 per bushel. The harvest price is $3.49 per bushel, $.47 per bushel less than the projected price. The projected price for soybeans in 2017 is $10.19 per bushel. The harvest price is $9.75 per bushel, $.44 less than the projected price.

Projected Price and Harvest Price Differences across Time

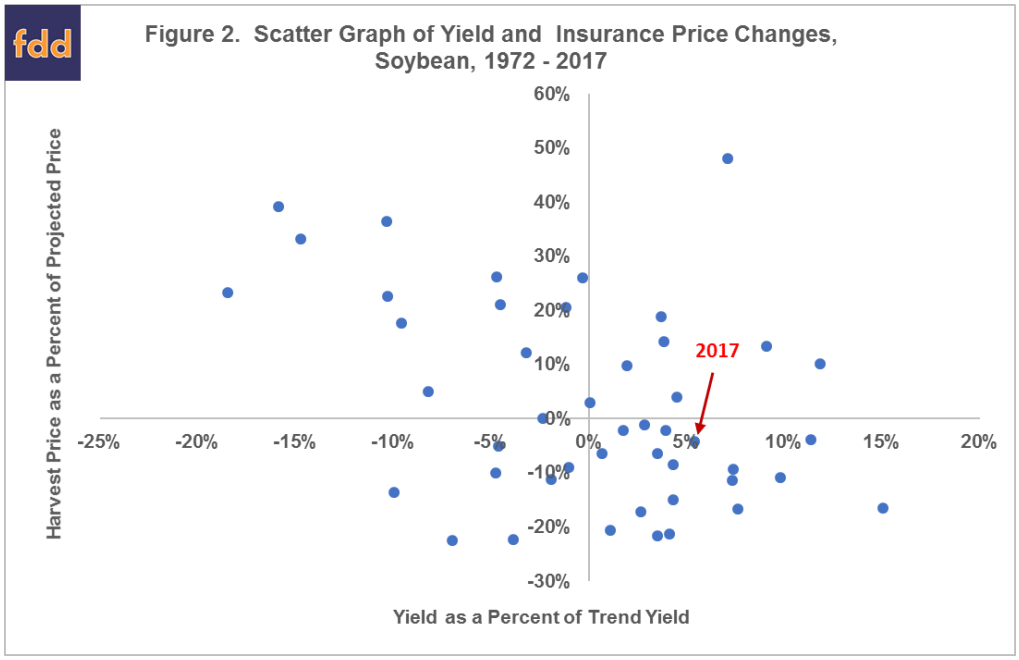
When national yields are above trend yields, harvest prices often are lower than projected prices. Conversely, harvest prices tend to be above projected prices when national yields are below trend. This negative relationship reflects supply impacts on prices. Higher then trend yields typically indicated more grain supply, leading to lower prices. Conversely, yields below trend yields typically indicate less grain supply and lower prices.

This relationship is illustrated for corn in the scatter graph in Figure 1. Each dot represents a year. The horizontal axis shows national yield as a percent of trend yield. Positive values indicate above trend yields and negative values indicate below trend yields. The horizontal axis shows harvest price as a percent of projected price. Positive values indicate that harvest prices are above projected prices. Negative values indicate that harvest prices are less than projected prices. Each dot represents a year. The dot for 2017 is denoted. In 2017, the 175 U.S yield is 5% above the 167.4 trend yield and the $3.49 harvest price is 12% below the $3.96 projected price.



As can be seen if Figure 1, there is a negative relationship between yields and changes in insurance prices. There is a -.46 correlation coefficient between yields as a percent of trend yield and harvest price as a percent of projected price. Yields are above trend in 61% of the year. When yields are above trend, harvest prices are lower than projected prices in 79% of the years.

Figure 2 shows a similar scatter graph for soybeans. A similar negative relationship exists for soybeans as it does for corn. The correlation coefficient between yields and insurance prices is -.40 for soybeans, less negatively correlated than for corn (-.46 correlation coefficient). Soybean yields are above trend in 57% of the years. When yields are above trend, the harvest price is below the projected price in 69% of the years.



Summary

In many respects, 2017 is a typical year. National yields where above trend in 2017. From 1972 to 2017, yields are above trend in 60% of the years. In years when yields are above trend, harvest prices are below projected prices in about 70% of the years. In 2017, both corn and soybean harvest prices are below projected prices.

Postscript

An interesting "fact" is that the corn and soybean harvest prices are exactly the same in 2016 and 2017. Harvest price in both years is $3.49 for corn and $9.75 for soybeans (see Table 1). The chance of having the same harvest prices in two adjacent years for one crop is very small. Chance for two crops are smaller. There is no significance to this fact, other than it happens rarely.