



Weekly Farm Economics: Will ACRE Pay in 2011 and 2012?

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March 13, 2012

farmdoc daily (2):49

Recommended citation format: Schnitkey, G. "Will ACRE Pay in 2011 and 2012?" *farmdoc daily* (2):49, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, March 13, 2012.

Permalink: <http://farmdocdaily.illinois.edu/2012/03/will-acre-pay-in-2011-and-2012.html>

http://farmdoc.illinois.edu/podcasts/fefo/FEFO_12_07.mp3

Average Crop Revenue Election (ACRE) – the counter-cyclical revenue program included in the 2008 Farm Bill – is not likely to make payments for corn, soybeans, or wheat in Illinois for the 2011 crop year. For ACRE to make payments on the 2012 crop year, prices would have to decrease precipitously from 2011 levels. If the 2012 actual corn yield is at its benchmark level, the market year average price for 2012 would have to be below \$4.20 before ACRE payments would be received on corn in Illinois. In Illinois, 2012 market year average prices would have to be below \$10.35 for soybeans and \$5.81 for wheat before ACRE would make payments, given that 2012 actual yields are at their benchmark values.

ACRE Briefly Explain

ACRE is a counter-cyclical revenue program that producers can choose rather than the traditional counter-cyclical price program (click [here](#) for more detail). For a specific crop within a state, ACRE will make payments when two benchmarks are met:

1. State revenue is below state benchmark, and
2. Farm revenue is below a farm benchmark.

Table 1. Calculation of Benchmark Revenue for ACRE in Illinois

Year	Actual Yield	Benchmark Yield ¹	Market Year Average Price	Benchmark Price ²	Preliminary Benchmark Revenue ³	Benchmark Revenue ⁴
Panel A. Corn						
2004	179					
2006	143					
2006	163					
2007	175		4.20			
2008	177		4.06			
2009	173	172	3.55	4.13	639.32	639.32
2010	157	170	5.18	3.81	582.93	582.93
2011P	155	170	6.20	4.37	668.61	641.22
2012F		168		5.69	860.33	705.34
Panel B. Soybeans						
2004	49.5					
2006	46.5					
2006	48.0					
2007	43.5		10.10			
2008	46.5		9.97			
2009	46.0	47.0	9.59	10.04	424.69	424.69
2010	51.0	46.5	11.30	9.78	409.29	409.29
2011P	46.5	47.0	12.00	10.45	442.04	442.04
2012F		47.0		11.65	492.80	486.24
Panel C. Wheat						
2004	58.8					
2006	59.4					
2006	66.9					
2007	50.3		6.48			
2008	62.4		6.78			
2009	55.4	60.2	4.87	6.63	359.21	359.21
2010	51.5	59.1	5.70	5.83	310.1	323.29
2011P	58.3	56.4	7.30	5.29	268.52	290.96
2012F		55.1		6.50	322.34	320.06

Number in italics are forecasts.

¹ Olympic average of five previous years' yields.

² Average of last two years' market average prices.

³ Benchmark yield x benchmark price x 90%.

⁴ Benchmark revenue equals preliminary benchmark revenue, unless the benchmark moves more than 10 percent from last year's benchmark.

Before any farm can receive an ACRE payment, state revenue must be below the state benchmark. Analyses suggest that the farm benchmark will usually be met when state revenue is below the state benchmark (click [here](#) for detail). As a result, the remainder of this post focuses on the state benchmark.

State benchmark revenue is based on benchmark yield and benchmark price. The benchmark yield is the Olympic average of the five previous state yields, where an Olympic average is found by eliminating the high and low values and averaging the remaining values. The benchmark price is the average of the previous two years market year average prices. Preliminary benchmark revenue then equals benchmark yield times benchmark price. The benchmark revenue equals the preliminary benchmark revenue, unless the preliminary benchmark is 10% higher or lower than the previous year's benchmark revenue. Benchmark revenue cannot vary more than 10% from the previous benchmark. This is important as the benchmark often is limited by the 10% rule.

Calculation of benchmark revenue is illustrated for corn (see Panel A of Table 1). In 2011, benchmark yield is 170 bushels per acre and benchmark price is \$4.37 per bushel. Preliminary benchmark revenue is \$668.61 per acre. However the preliminary benchmark is 10 percent higher than the \$582.93 per acre benchmark revenue for 2010. As a result, the 2011 benchmark revenue is 1.10 times \$582.93, or

\$641.22 per acre.

State benchmark revenue is compared to state revenue to see if the first criterion is met. State revenue equals actual yield times the market year average price.

2011 Projected Payments

Payments for 2011 will not be known until after the market year average prices are determined. This will be in September for corn and soybeans and in June for wheat. Also, actual yields have not been released yet by the Farm Service Agency (FSA). However, actual yields can be estimated using production and acres released by the National Agricultural Statistics Service (NASS). These estimates using NASS data will be close to final yields released by FSA. Based on estimated yields, the price below which ACRE will make a payment is estimated for corn, soybeans, and wheat.

Corn: The 2011 benchmark revenue is \$641.22 and actual Illinois yield will be close to 155 bushels per acre. This means that the 2012 market year average price has to be below \$4.14 per bushel ($\$641.22 / 155$) before a payment occurs. The midpoint of the March 9th World Agricultural Supply and Demand Estimates (WASDE) report corn price forecast is \$6.20. The chance of prices falling below \$4.14 is extremely small.

Soybeans: The 2011 benchmark revenue is \$442.04 per acre and actual Illinois yield will be close to 46.5 bushels. This means that the market year average price has to be below \$9.51 ($\$442.02 / 46.5$) before ACRE will make a payment. The midpoint of the March 9th WASDE report corn price forecast is \$12.00. The chance of prices falling below \$9.51 is extremely small.

Wheat: The 2011 benchmark revenue is \$290.96 per acre and actual Illinois yield will be close to 58.3 bushels. This means that the market year average price has to be below \$4.99 per bushel ($\$290.96 / 58.3$) before ACRE will make a payment. The midpoint of the March 9th WASDE report wheat price forecast is \$7.30. The chance of prices falling below \$4.99 is extremely small.

2012 Projected Payments

State benchmark revenues are estimated for 2012 based on

1. benchmark yields calculated using actual yields from 2007 through 2010 and the estimated 2011 yields and
2. benchmark prices based on the actual market year average price for 2010 and WASDE estimate of prices for 2011.

Estimated state revenue benchmarks are shown in Table 1.

Corn: Benchmark revenue estimated for 2012 is \$705.34 per acre. Note that \$705.34 is substantially below the preliminary benchmark revenue of \$860.33 per acre. The \$860.33 preliminary benchmark is based on a \$5.69 benchmark price, substantially higher than the 2011 benchmark price of \$4.37. In 2012, benchmark revenue level will be limited by the 10 percent rule and will be \$705.34 per acre. Given \$705.34 benchmark revenue, price would have to be below \$4.20 before ACRE payments occur, given that the 2012 actual yield is at its benchmark yield of 168 bushels per acre. A lower break-even price occurs if actual 2012 yield is above benchmark yield and vice versa. The \$4.20 break-even price is \$2.00 per bushel below the estimated 201 market year average price of \$6.20.

Soybeans: Benchmark revenue estimated for 2012 is \$486.24. Like corn, the 10% cap on revenue movements limits the 2012 benchmark revenue for soybeans. For ACRE to make a payment in 2012, market year average price would have to be below \$10.35, given a yield of 47 bushels per acre. The \$10.35 break-even price is \$1.65 per bushel below the 2011 estimated price of \$12.00 per bushel.

Wheat: Benchmark revenue estimated for 2012 is \$320.06. Benchmark revenue is limited by the 10 percent cap on movements of benchmark from one year to the next. For ACRE to make a payment in 2012, the 2012 market year average prices would have to be below \$5.81, given that the yield is at its benchmark value of 55.1 bushels per acre.

Summary

Large declines in price will have to occur in 2012 before ACRE makes a payment. Prices below the 2012 break-even level price levels are possible. For example, the 2012 break-even for corn in 2012 is \$4.20, given that 2012 actual yield is at its benchmark level. Market year average prices were below \$4.20 in 2008 (\$4.06) and 2009 (\$3.55). It is possible that prices would decline to these levels. However, this would be a large price decline. Corn price would have to decline from an estimated \$6.20 for 2011 to \$4.20 in 2012, a decline of 32 percent. Since 1972, a decline of this magnitude occurred once between 1985 and 1986. However, a 32 price decline would most likely be associated with higher yields, causing yields to partially offset price declines. This suggests that 2012 ACRE payments for corn are unlikely.

Even though ACRE payments are unlikely, selecting ACRE still may be prudent as ACRE does provide revenue protection. Farms that are already enrolled in ACRE cannot change the election for 2012. If a farm is in the traditional counter-cyclical price program, that farm can be switched to ACRE on or before June 1, 2012.