



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



2015 and 2016 ARC-CO Payment Estimates using the ARC-CO PLC Payment Estimator

Gary Schnitkey, Nick Paulson, Jonathan Coppess

Department of Agricultural and Consumer Economics
University of Illinois

Carl Zulauf

Department of Agricultural, Environmental and Development Economics
Ohio State University

March 8, 2016

farmdoc daily (6):45

Recommended citation format: Schnitkey, G., N. Paulson, J. Coppess, and C. Zulauf. "2015 and 2016 ARC-CO Payment Estimates using the ARC-CO PLC Payment Estimator." *farmdoc daily* (6):45, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, March 8, 2016.

Permalink: <http://farmdocdaily.illinois.edu/2016/03/2015-and-2016-arc-co-payment-estimates.html>

The *FAST ARC-CO PLC Payment Estimator* has been updated to include 2015 National Agricultural Statistical Service (NASS) yields. By using these yields, accurate estimates of 2015 Agricultural Risk Coverage - County Option (ARC-CO) payments can be obtained. While variability in payments exist across counties, ARC-CO payments are likely in many counties in 2015 and 2016.

ARC-CO PLC Payment Estimator

Figure 1 is the main page of the *ARC-CO PLC Payment Estimator*. It is a Microsoft Excel spreadsheet available for download on the *farmdoc* website (available for download [here](#)). Users of the tool select a state, county, crop, and type in the main input box. In Figure 1, the selection is for corn in LaSalle County, Illinois. For this county, the type selection is "all." In contrast, some counties have two type alternatives: irrigated and non-irrigated. The *Payment Estimator* provides payment estimates for all county-crop-type combinations for which data is available from the Farm Service Agency. Actual payments are available for 2014. Payment estimates can be obtained for 2015 through 2018.

We request all readers, electronic media and others follow our citation guidelines when re-posting articles from *farmdoc daily*. Guidelines are available [here](#). 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 [here](#).

Figure 1. Main Page from the ARC-CO PLC Payment Estimator


Input

State	Illinois
County	LaSalle
Crop	Corn
Type	All
PLC Payment Yield	140

Use Defaults

Help

Print



What-If

Change the county yields and Market Year Average (MYA) prices for 2015 and 2018 to see payments under ARC-County and PLC. Payments are stated per base acre, as such they are multiplied by .85. If there are 100 base acres per farm, multiply the result below by 100.

Input	County		Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
	Year	Yield	MYA Price ¹	Benchmark		ARC Guarantee ⁴	ARC Payment ⁵
				Yield ²	Price ³		
2009	183	3.55					
2010	163	5.18					
2011	177	6.22					
2012	134	6.89					
2013	187	4.46				\$/acre	\$/acre
2014	198	3.70	174	5.29	792	46.74	0
2015 *	178	3.60	176	5.29	801	79.14	12
2016	183	3.80	181	4.79	746	42.68	0
2017	185	4.00	183	3.99	628	0.00	0
2018	187	4.00	185	3.83	609	0.00	0
Five-Year Average						33.71	2

National loan rate equals: 1.95 Reference price equals: 3.70

2015 ARC and PLC payments

* A star next to the yield means this is a NASS yield. The yield FSA uses in calculating 2015 payments will be close to this yield. The FSA yield likely will be below this NASS yield.

2015 MYA price currently are based on estimates. These prices will be known at the end of the marketing year (end of August for corn and soybeans).

2014 payments were reduced 6.8% for sequester. This reduction is not included for 2015 payments.

2014 ARC and PLC payments:

2014 ARC-CO and PLC payments are estimated on a per base acre basis. Payments are adjusted to account for the fact that payments are made on 85% of base acres.

2014 payments are adjusted for a 6.8% sequester. The 2014 payment is multiplied by .932 (1 - .068). NaN for 2014 yields mean that Farm Service Agency has not released county yield data.

¹ Market year average price which is a national price for a marketing year.

² Equals Olympic average of five-previous yields. Olympic averages eliminate high and low observations.

³ Equals Olympic average of five-previous prices, price can not be less than reference price.

⁴ Equals benchmark yield x benchmark price x .86.

⁵ Equals .85 x minimum of (ARC guarantee - county yield x MYA price) or (10% of benchmark yield x benchmark price), when county revenue is less than ARC guarantee, zero otherwise.

⁶ Equals (reference price - higher of MYA price or national loan rate) x PLC payment yield x .85.



2014 ARC-CO Payments

For the 2014 crop year, the ARC-CO payment for LaSalle County is \$46.74 per base acre (see Figure 1). This value includes the adjustment that payments are made on only 85% of base acres. It also includes the reduction from the 6.8% sequester in 2014. FSA made most ARC-CO payments for the 2014 crop year in October 2015. Maps of 2014 ARC-CO payments are available in a *farmdoc daily* article ([November 10, 2015](#)).

2015 ARC-CO Payment Estimates

The estimated payment for the 2015 crop year for corn in LaSalle County is \$79.14 per acre (see Figure 1). This value is based on a 178 bushel per acre county yield. The 178 bushel per acre yield comes from NASS, as is indicated by the "*" next to the 2015 yield estimate (see Figure 1). Where available, FSA uses NASS data in calculating its final yields, but supplements NASS data with RMA data (see *farmdoc daily*, [December 1, 2015](#)). Almost always, the yield FSA uses in calculating ARC-CO payments will be the same

or below the NASS yield. In the middle of the Corn Belt, differences between NASS and FSA yields typically are less than a bushel per acre. If NASS does not provide data for county, a “*” will not appear next to the 2015 yield and a trend estimates of 2015 yield is used in the *Payment Estimator*. Without NASS data, yield estimate in the *Payment Estimator* are not very accurate.

The MYA price used in 2015 payment estimates is \$3.60 per bushel, the current midpoint of the World Agricultural Supply and Demand Estimates (WASDE) range. The marketing year is not over, and the MYA price is not known with certainty. Marketing years for corn and soybeans will end at the end of August 2016. However, the potential for price change is diminished by the fact that the corn and soybean marketing is now 5/12 completed.

The payment estimates for 2016 are subject to change since FSA yields may differ from yield estimates in the *Payment Estimator* and the marketing year is not over. Payments for the 2015 crop year will not be made until after October 1, 2016. Maps of estimated 2015 corn and soybean payments are available in a recent article (*farmdoc daily* [February 23, 2016](#)).

2016 ARC-CO Payment Estimates

A 2016 crop year payment estimate by ARC-CO also is shown in the *Payment Estimator*. These estimates are useful for individuals preparing budgets and rental bids for farmland in 2016. The 2016 payments will accrue to those individuals with a share in 2016 production.

In Figure 1, the 2016 ARC-CO estimate is \$42.68 based on a 183 bushel per acre yield and a \$3.80 price. The 2016 projected yield is a trend estimate of yield. Obviously little is known about 2016 growing conditions and prices and yields can change from current estimates. As a result, the 2016 payment will vary from that shown in the *Payment Estimator*. Payments for the 2016 crop year will not be made until after October 1, 2017.

Figure 2 shows 2016 estimates of ARC-CO payments for Illinois counties for corn based on a \$3.80 price and trend yields. As can be seen, payments vary across counties with high payments of over \$60 per base acre in some counties and no payments in other counties. The difference in payments across counties is a reflection of a number of factors, with the most prominent being the yields from 2009 through 2015 used to estimate the benchmark yield for ARC-CO. The higher the benchmark yield, the higher the ARC-CO guarantee, leading to higher ARC-CO payments.

Projected 2016 ARC-CO payments by Illinois counties for soybeans are shown in Figure 3. Estimates are made using a \$9.20 MYA price and trend yields. As can be seen, payments estimates vary across counties.

Payments in 2016 will vary from those shown in Figures 2 and 3. While estimates, these payments do illustrate several points:

1. Based on current information, ARC-CO payments in 2016 for both corn and soybeans are expected.
2. These payments will vary across counties, just as they did in 2014 and 2015. The nature of the variability will differ from those shown in Figures 2 and 3, but expect variability across counties.

Summary

In order to help with budgeting and rental decisions, the *ARC-CO PLC Payment Estimator* can be used to estimate ARC-CO payments for 2015 and 2016. ARC-CO payments are likely in 2015 and 2016, but will vary across counties. Payment estimates for 2015 are more accurate than payment estimates for 2016, particularly for county and crop combinations where NASS data is available. However, 2015 payments can still vary from current estimates.

Figure 2. Projected 2016 ARC-CO Payments for Corn

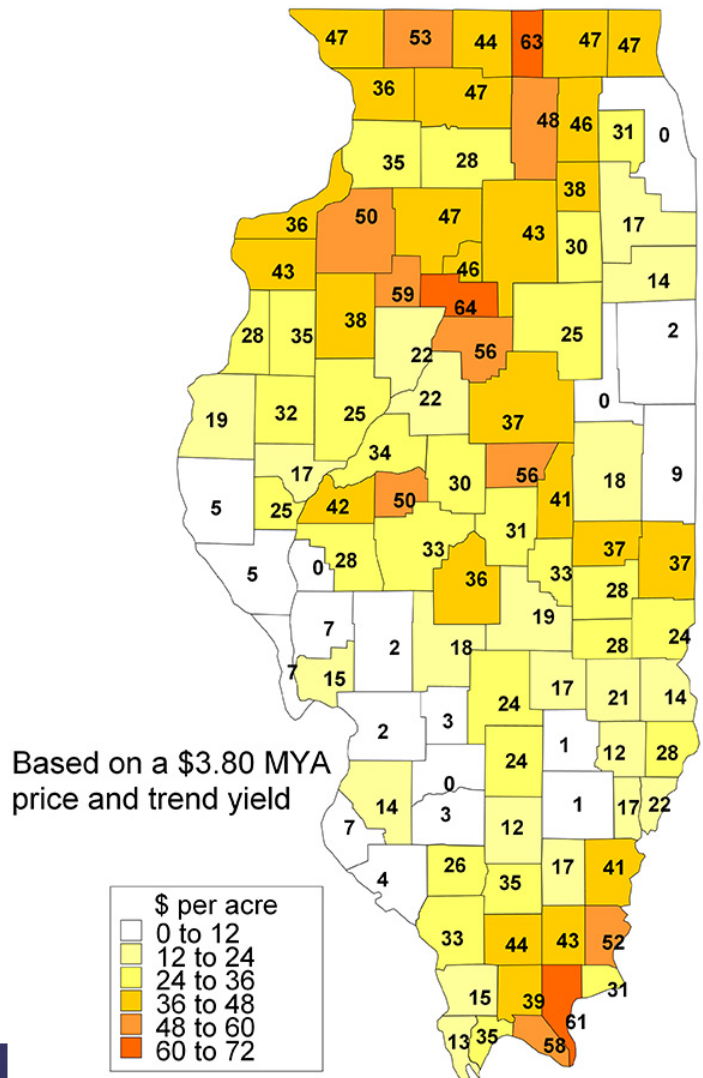
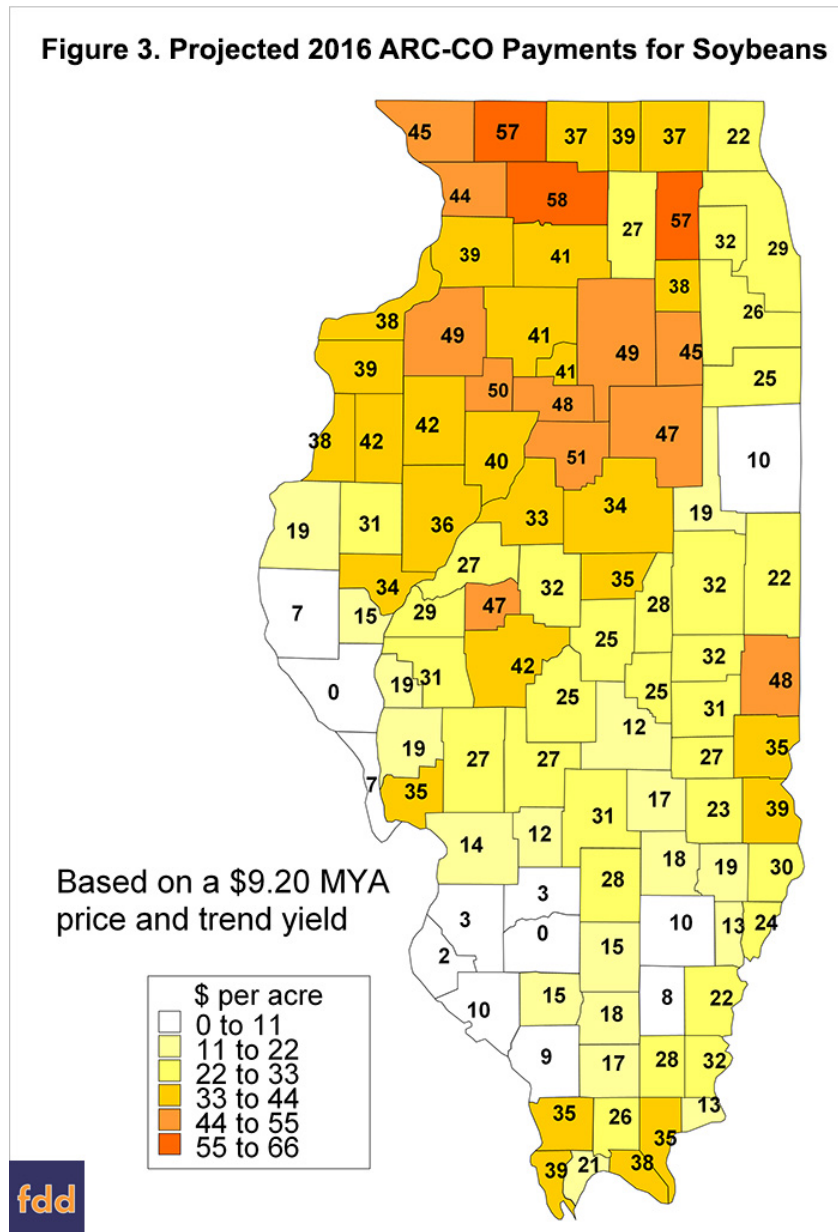


Figure 3. Projected 2016 ARC-CO Payments for Soybeans



References

Paulson, N., and G. Schnitkey. "Corn versus Soybean Returns: 2016 Projections with Historical Comparisons." *farmdoc daily* (6):35, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 23, 2016.

Schnitkey, G. "FSA Yields Used in Computing ARC-CO Payments Compared to NASS Yields." *farmdoc daily* (5):222, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 1, 2015.

Schnitkey, G., J. Coppess, N. Paulson, and C. Zulauf. "2014 ARC-CO Payments: Release of 2014 County Yields." *farmdoc daily* (5):209, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, November 10, 2015.