



Weekly Farm Economics: 2017 ARC-CO Payments and Outlook for 2018 Payments

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The Farm Service Agency (FSA) has released 2017 county yields, 2017 Market Year Average (MYA) prices have been determined, and FSA is in the process of making 2017 ARC-CO payments. This article presents U.S. maps of 2017 ARC-CO payments for corn, soybeans, and wheat. A table of Illinois payments also is given. While 2017 ARC-CO payments are known, 2018 payments are not determined. County yields for 2018 will not be known for some time and the 2018 market years for corn and soybeans are just beginning. Still, it seems prudent to build low expectations for 2018 ARC-CO payments.

ARC-CO and Corn

ARC-CO makes a payment when county revenue falls below 86% of the county's benchmark revenue. Benchmark revenue is the benchmark yield times the benchmark price. The benchmark yield is the Olympic average of the five previous yields for a county. The benchmark price is the Olympic average of the five previous MYA prices, with the minimum price used in calculations equal to the reference price (\$3.70 for corn, \$8.40 for soybean, \$5.50 for wheat).

Figure 1 shows the *ARC-CO Payment Estimator*, a Microsoft Excel spreadsheet available for download from the FAST section of *farmdoc*, illustrating ARC-CO calculations for corn in Calhoun County, Illinois. Actual payments are shown for 2014 through 2017, with an estimate given for 2018.

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Figure 1. ARC-CO PLC Payment Estimator For Corn in Calhoun County, Illinois 


Input

State	Illinois
County	Calhoun
Crop	Corn
Type	All
PLC Payment Yield	119

Use Defaults

Help

Print



What-If

Change the county yields and Market Year Average (MYA) prices for 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	Agricultural Risk Coverage (ARC) - County					Price Loss Coverage (PLC)		
	Year	County Yield	MYA Price ¹	Benchmark		ARC Guarantee ⁴	ARC Payment ⁵	Payment ⁶
				Yield ²	Price ³			
2009	177	3.55						
2010	153	5.18						
2011	144	6.22						
2012	107	6.89						
2013	165	4.46				\$/acre	\$/acre	
2014	195	3.70	154	5.29	701	0.00	0	
2015	144	3.61	154	5.29	701	64.54	8	
2016	174	3.36	151	4.79	622	29.62	32	
2017	155	3.36	161	3.95	547	20.69	32	
2018	169	3.50	165	3.70	525	0.00	19	
Five-Year Average						22.97	18	

National loan rate equals: 1.95 Reference price equals: 3.70

ARC and PLC payments:

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

Actual payments are given for 2014 through 2017. Payments are adjusted for a 6.8% sequester.

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. Reduced by sequester (6.8%).

⁶ Equals (reference price - higher of MYA price or national loan rate) x PLC payment yield x .85. Reduced by sequester (6.8%)

Support provided by:

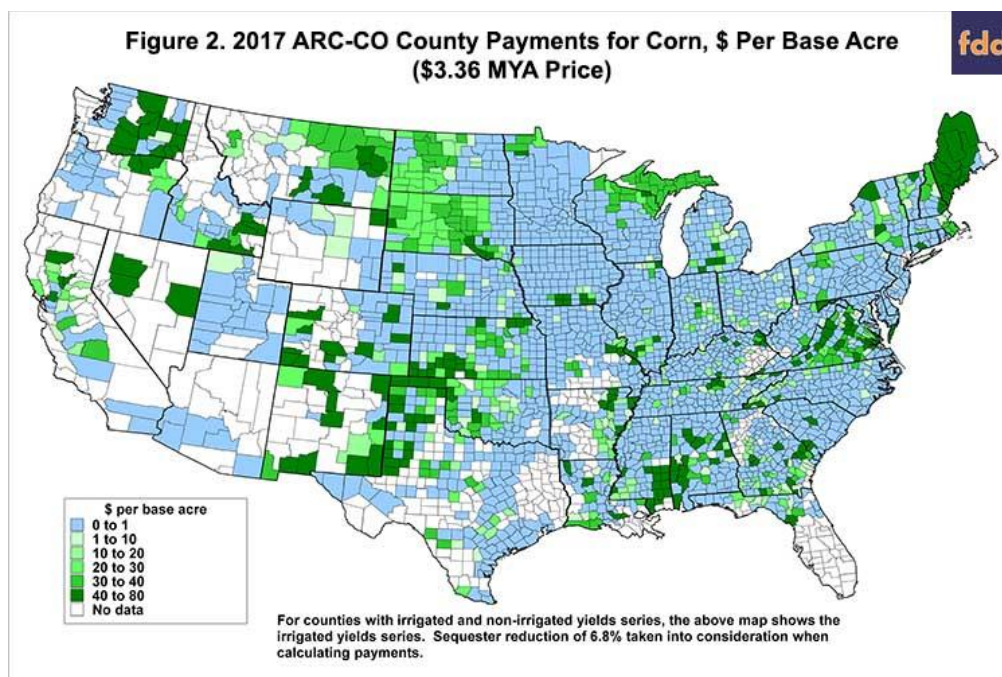


In 2017, the benchmark yield in Calhoun County is 161 bushels per acre and the benchmark price is \$3.95 per bushel, giving an ARC guarantee of \$547 per acre ($\$547 = .86 \times 161 \text{ yield} \times \3.95 price). In 2017, the actual county yield is 155 bushels per acre and the MYA price is \$3.36, yielding revenue of \$521 per acre. Actual revenue is less than the ARC guarantee, resulting in an ARC-CO payment. After adjusting for the sequester and the fact that only .85 base acres receive payments, the 2017 ARC payment is \$20.69 (see footnote 5 of Figure 1 for more detail in calculating ARC-CO payments). Note that the benchmark price for 2018 is \$3.70 per acre, lower by \$.25 than the 2017 benchmark price of \$3.95. The benchmark price is at its lowest level. The Olympic average of the five previous prices discards the \$4.46 MYA for 2013 as the high price, leaving only \$3.70 in the set of prices used to

calculate the ARC-CO benchmark price. A lower 2018 benchmark price results in a lower 2018 ARC guarantee.

We have no estimates of 2018 county yields and the 2018 market year has not ended. Still, it seems highly likely that ARC-CO payments will not make payments in most counties in 2018. Yields have been exceptional across much of the nation. Prices would have to be near \$3.00 for ARC-CO to make payments.

For 2017 corn, geographical areas where many counties will receive 2017 ARC-CO payments include western North Dakota, South Dakota, Kansas, the panhandle of Texas, eastern Arkansas, central Indiana, western Ohio, central Michigan, eastern New York, and Virginia. Other counties sporadically located throughout the United States will receive payments as well (see Figure 2). The largest payments by ARC-CO are almost entirely outside the Corn Belt.



Soybeans

Figure 3 shows ARC-CO soybean calculations for DeKalb County, Illinois. After sequester, DeKalb County is projected to have a \$51.62 payment per base acre. The ARC-CO guarantee is \$560 per acre based on a 60 bushel per acre benchmark yield and a \$10.86 per bushel benchmark price. Unlike many counties, DeKalb County had a below average yield resulting in an ARC-CO payment. DeKalb County had a 53 bushel per acre yield in 2018, 7 bushels below its benchmark yield.

The benchmark price for 2018 will be \$9.63 per bushel, \$1.23 per bushel lower than the 2017 benchmark price of \$10.86. Yields are reportedly above average for soybeans in many areas of the United States. Large 2018 yields combined with lower benchmark prices will result in fewer counties receiving ARC-CO payments for soybeans in 2018 unless the trade situation results in much lower MYA prices for soybeans than currently expected.

For soybeans, geographical areas where ARC-CO made payments in 2017 include western North and South Dakota; central Kansas; border counties along the Wisconsin-Illinois border; eastern Indiana, western Ohio, Michigan; and western Pennsylvania (see Figure 4).

Figure 3. ARC-CO PLC Payment Estimator For Soybeans in DeKalb County, Illinois **fdd**

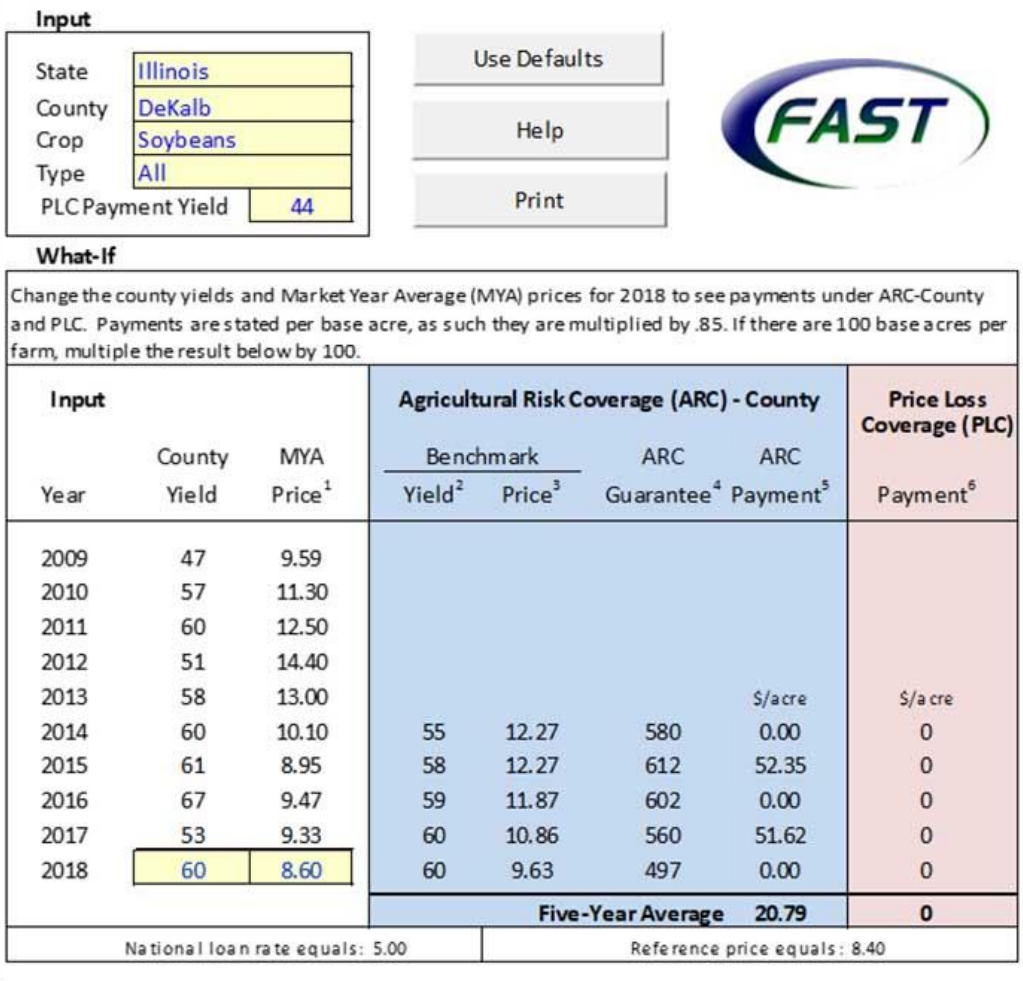
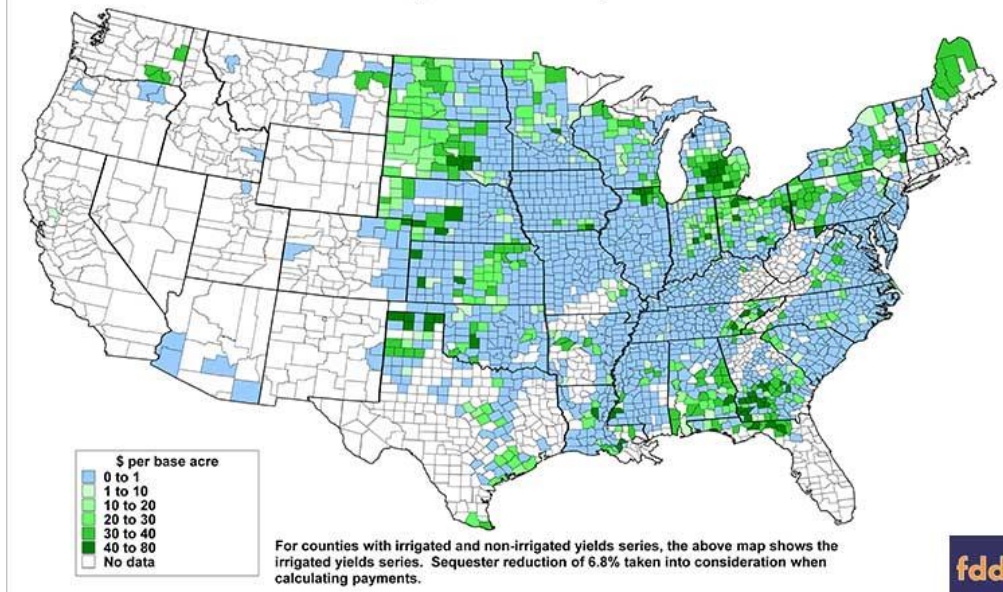
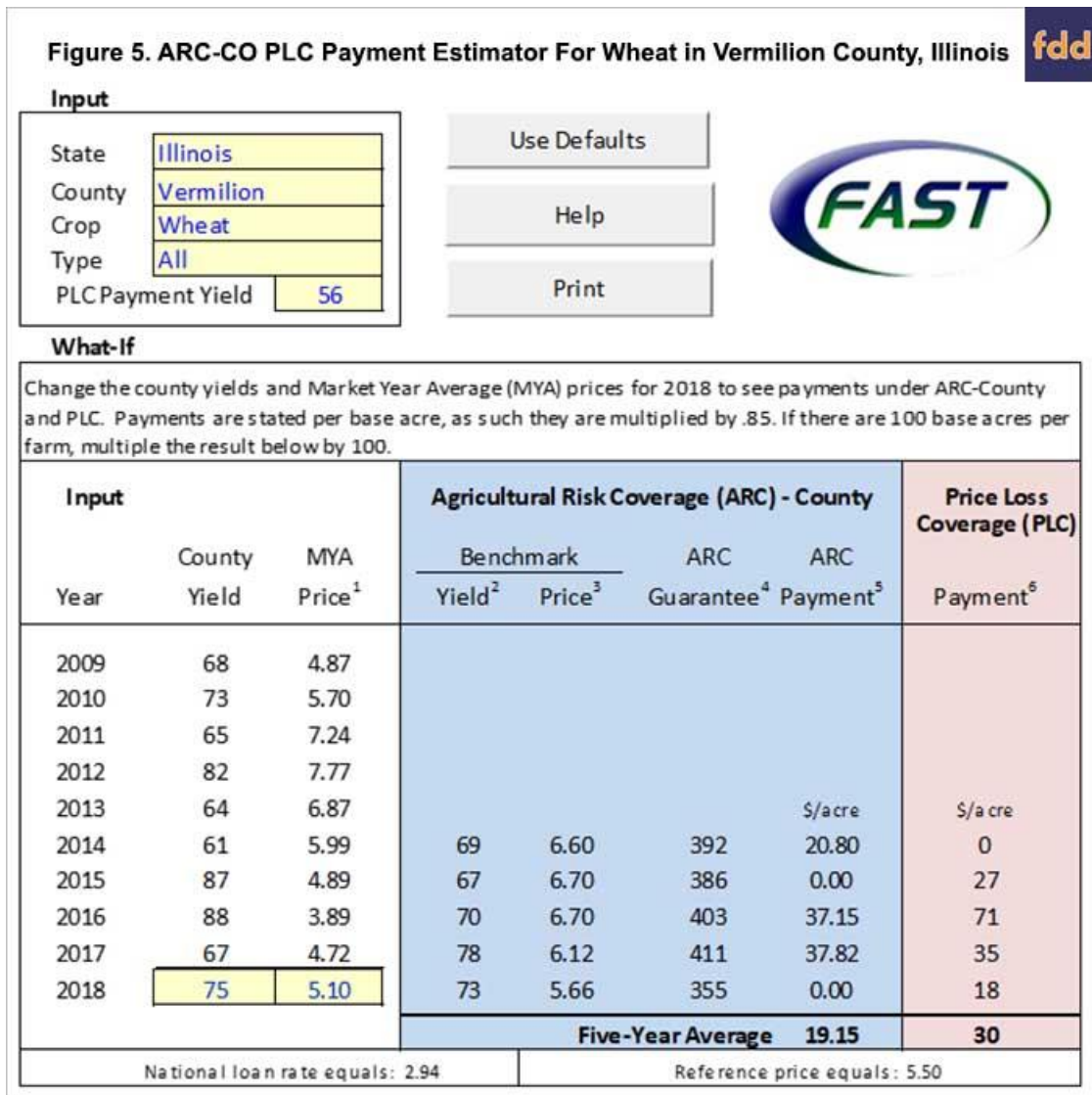


Figure 4. Estimated 2017 ARC-CO County Payments for Soybeans, \$ Per Base Acre (\$9.33 MYA Price)

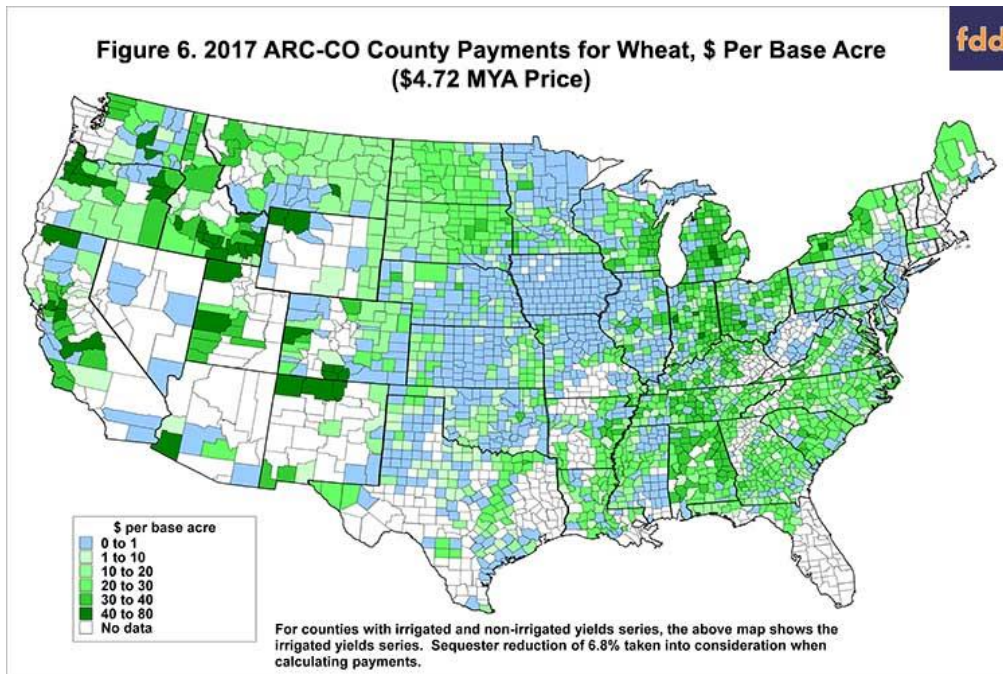


Wheat

Landowners in Vermilion County, Illinois received a \$37.82 per acre payment on wheat based on a 78 bushel per acre benchmark yield and a \$6.12 benchmark price (see Figure 5). The 2018 benchmark price will be reduced to \$5.66 per bushel, lowering payments in 2018.



Geographical areas having many counties receiving 2017 ARC-CO payments include Montana, North Dakota, South Dakota, eastern Kansas, Oklahoma, central Texas, Indiana, Ohio, Michigan, and Virginia (as Figure 6). The largest wheat payments are in the inter-mountain and Pacific Coast states.



Illinois Payments

Estimated corn, soybeans, and wheat payments for Illinois counties are shown in Table 1. Corn payments will occur for some northern counties and for a band of counties in southeast Illinois. Some northern Illinois counties are projected to receive soybean payments. ARC-CO is projected to make payments for wheat in some counties in the middle part of the state.

Table 1. Estimated 2017 ARC-CO Payments per Base Acre in Illinois¹

	Soy-				Soy-				Soy-		
	Corn	Beans	Wheat		Corn	Beans	Wheat		Corn	Beans	Wheat
Adams	0	0	0	Hardin	36	0	0	Morgan	0	0	0
Alexander	46	8	18	Henderson	0	0	0	Moultrie	0	0	26
Bond	0	0	0	Henry	0	0	0	Ogle	0	23	0
Boone	8	47	0	Iroquois	0	0	0	Peoria	0	0	0
Brown	0	0	0	Jackson	0	0	0	Perry	28	0	0
Bureau	0	0	0	Jasper	0	0	0	Piatt	0	0	0
Calhoun	21	0	19	Jefferson	14	8	0	Pike	0	0	1
Carroll	0	0	0	Jersey	5	0	12	Pope	0	0	0
Cass	0	0	31	Jo Daviess	0	0	0	Pulaski	0	0	26
Champaign	0	0	38	Johnson	0	0	0	Putnam	0	8	0
Christian	0	0	0	Kane	32	30	0	Randolph	41	0	0
Clark	0	0	0	Kankakee	0	0	0	Richland	0	0	0
Clay	45	8	0	Kendall	0	0	0	Rock Island	0	0	0
Clinton	13	0	3	Knox	0	0	0	St. Clair	0	0	0
Coles	0	0	8	Lake	48	38	31	Saline	0	0	8
Cook	0	37	0	LaSalle	0	0	0	Sangamon	0	0	33
Crawford	0	0	0	Lawrence	0	0	6	Schuyler	0	0	26
Cumberland	0	0	0	Lee	0	0	4	Scott	0	0	0
DeKalb	0	52	0	Livingston	0	0	2	Shelby	0	0	2
De Witt	19	0	0	Logan	0	0	32	Stark	0	0	0
Douglas	0	0	0	McDonough	0	0	0	Stephenson	0	0	0
DuPage	0	0	0	McHenry	10	46	21	Tazewell	0	0	0
Edgar	0	0	23	McLean	0	0	0	Union	0	0	0
Edwards	0	0	0	Macon	0	0	20	Vermilion	0	0	38
Effingham	0	0	0	Macoupin	0	0	10	Wabash	0	0	0
Fayette	0	0	0	Madison	0	0	32	Warren	0	0	0
Ford	0	0	22	Marion	20	8	22	Washington	46	0	0
Franklin	0	0	0	Marshall	0	0	0	Wayne	0	0	0
Fulton	0	0	1	Mason	0	0	0	White	0	0	19
Gallatin	0	0	6	Massac	0	0	0	Whiteside	0	0	0
Greene	0	0	8	Menard	0	0	0	Will	0	0	34
Grundy	0	0	13	Mercer	0	0	0	Williamson	0	0	8
Hamilton	0	0	0	Monroe	48	0	25	Winnebago	3	45	0
Hancock	0	0	0	Montgomery	0	0	3	Woodford	0	0	0

¹ These payments are for a bases acre of the crop. They have been adjusted for a sequester equal to 6.8%. Payments are estimates at prices of \$3.40 for corn, \$9.35 for soybeans, and \$4.70 for wheat. NASS county yields used in estimates. NA indicates that NASS did not release a yield for that county.

Summary

Reliable estimates of 2018 ARC-CO payments will be able to be made after NASS releases county yields in late February. At this point, ARC-CO payments likely will not be prevalent for 2018 production. Building \$0 per acre into cash flow estimates for the 2018 payments that will be received in fall 2019 seems prudent at this point.