



Estimated 2016 ARC-CO Payments

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

February 24, 2017

farmdoc daily (7):35

Gardner Policy Series

Recommended citation format: Schnitkey, G., N. Paulson, J. Coppess, and C. Zulauf. "Estimated 2016 ARC-CO Payments." *farmdoc daily* (7):35, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 24, 2017.

Permalink: <http://farmdocdaily.illinois.edu/2017/02/estimated-2016-arc-co-payments.html>

On February 23rd, the National Agricultural Statistical Service (NASS) released county yields for the 2016 crop year. With these yield estimates, fairly accurate estimates of 2016 Agricultural Risk Coverage at the county level (ARC-CO) payments can be obtained. We present maps showing estimated payments per base acre for corn, soybeans, and wheat. Also shown are maps giving 2016 county yields relative to benchmark yields. A table showing estimated payments per county in Illinois also is presented.

Procedures

Payments for 2016 are still estimates and will vary from those presented here for the following reasons:

- Farm Service Agency (FSA) uses different yields than NASS when calculating ARC-CO payments. Where NASS data is available, the NASS yield generally will be higher than the yield used by FSA. As a result, estimated payments presented here should be viewed as conservative.
- Market Year Average (MYA) prices are not known because the marketing year does not end until August for corn and soybeans and May for Wheat. MYA estimates used in these projections are \$3.50 per bushel for corn, \$9.60 per bushel for soybean, and \$3.85 per bushel for wheat. Ending MYA prices can vary from these estimates.
- Sequestration amounts may differ from those used here. The ARC-CO payments estimated here use the 6.8% sequestration reduction applied to the 2014 and 2015 payments. The sequestration amount may differ from the 6.8% estimate.

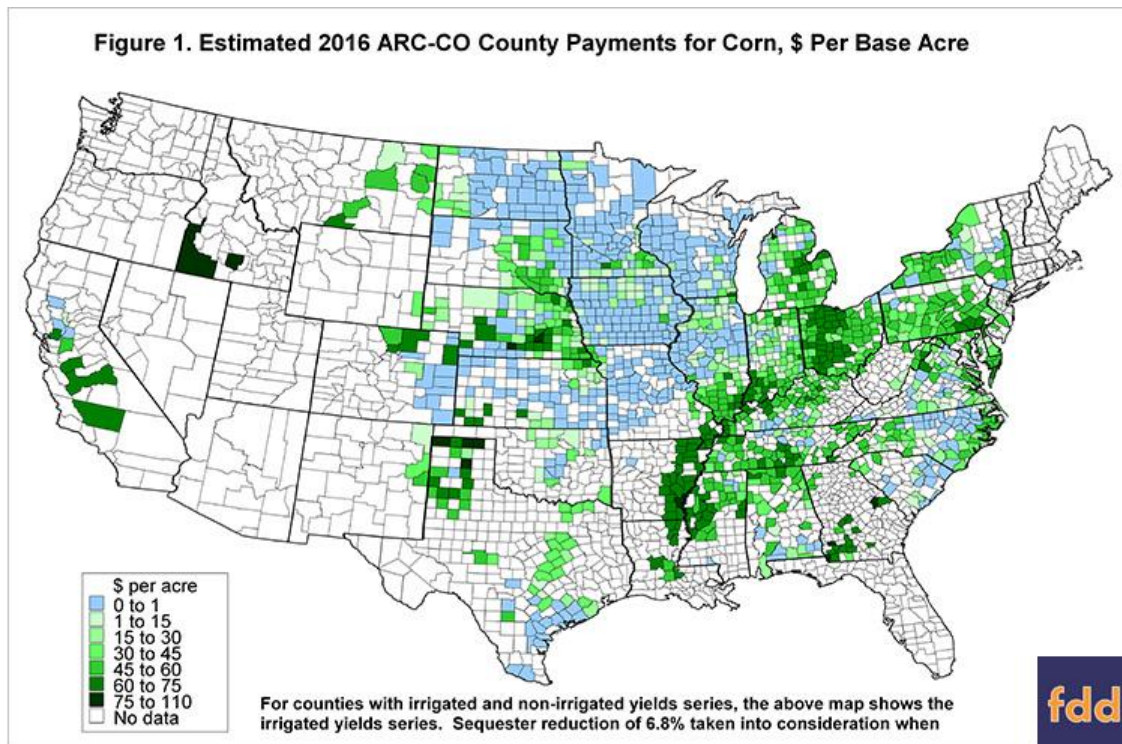
The following maps report payments on a per base acre basis. Payment acres are .85 of base acres and the .85 adjustment has been applied to payments presented in the following maps and table.

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](#).

ARC-CO is a revenue-based program where revenue equals the MYA price times the county yield. Variation in payments across counties occurs because of variations in county yields from benchmark yields. Those areas with county yields substantial above benchmark yields will have no ARC-CO payments. ARC-CO payments increase as the county yield falls relative to the benchmark yield, eventually reaching the cap equal to ten percent of benchmark revenue.

Corn

Large payments are projected to occur in the eastern United States, with over \$60 per base acre projected for many counties in central and western Ohio and central Michigan (see Figure 1). Large payments follow the Ohio River through Indiana, Illinois, and Kentucky, and proceed down the Mississippi. Counties in the bootheel of Missouri, Arkansas, and Mississippi are projected to have large payments. Some counties in South Dakota, Nebraska, and the panhandle of Texas are projected to get larger payments.

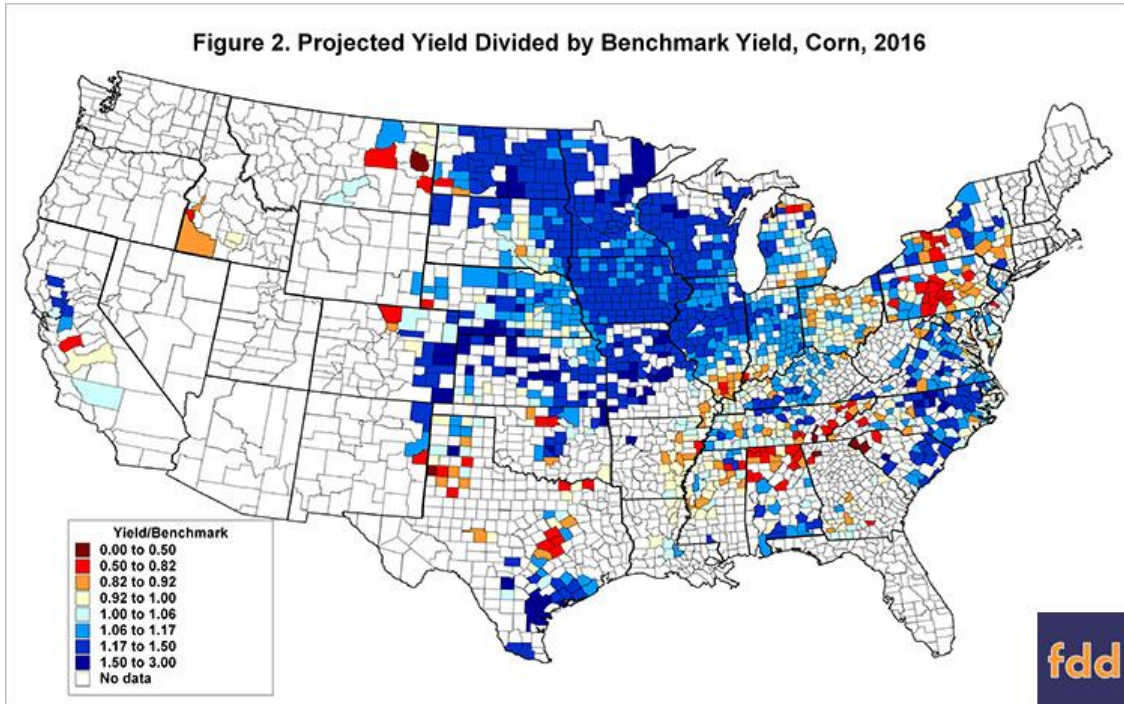


Many counties in Illinois, Iowa, Missouri, Wisconsin, Minnesota, and North Dakota are projected not to receive payments.

Those counties not receiving payments have 2016 county yields that are projected to be at least 1.17 higher than the benchmark yields. The 1.17 comes from a comparison of the 86% ARC-CO guarantee to the relative decrease in the MYA price relative to the benchmark price. The \$3.50 MYA price is .72 of the \$4.79 benchmark price for 2016 ($.72 = 3.50/4.79$). To not trigger a payment, 2016 actual yields must be 1.17 higher than the benchmark yield ($1.17 = .86 / .73$).

In Figure 2, counties with the two darker shades of blue have projected yields that are at least 1.17 times the benchmark yield. As can be seen, lower yields predominate in areas projected to receive county payments including the eastern United States, southern United States, and along the Mississippi River.

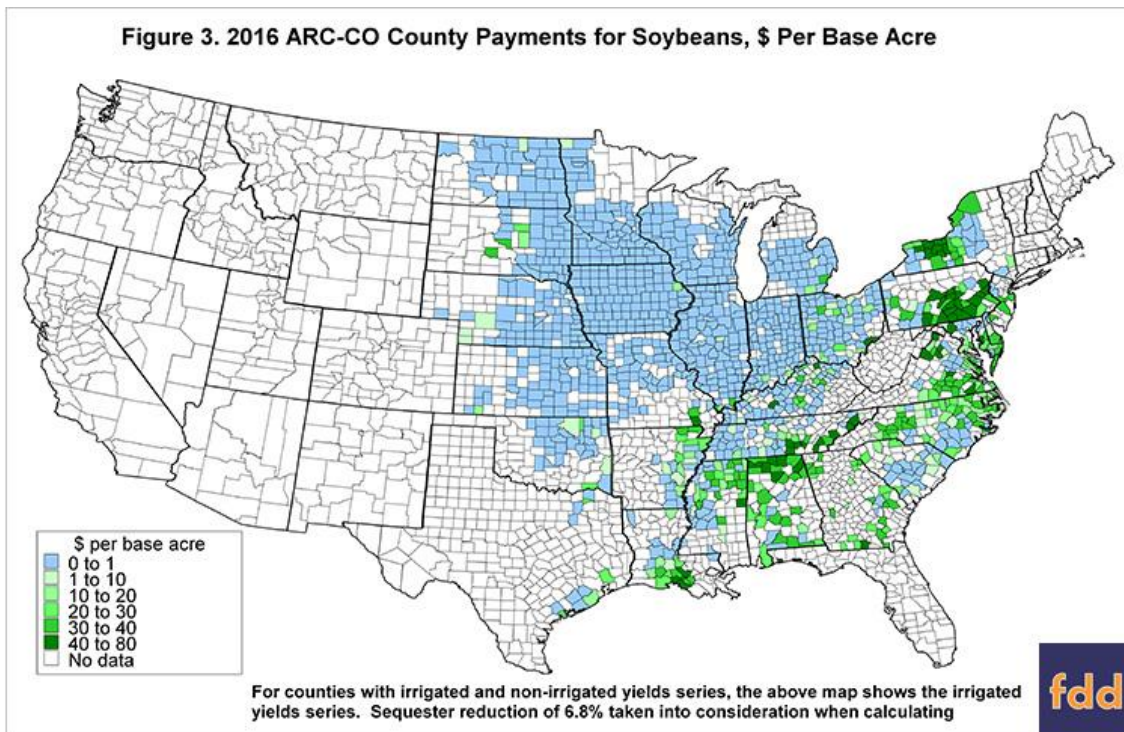
Figure 2. Projected Yield Divided by Benchmark Yield, Corn, 2016



Soybeans

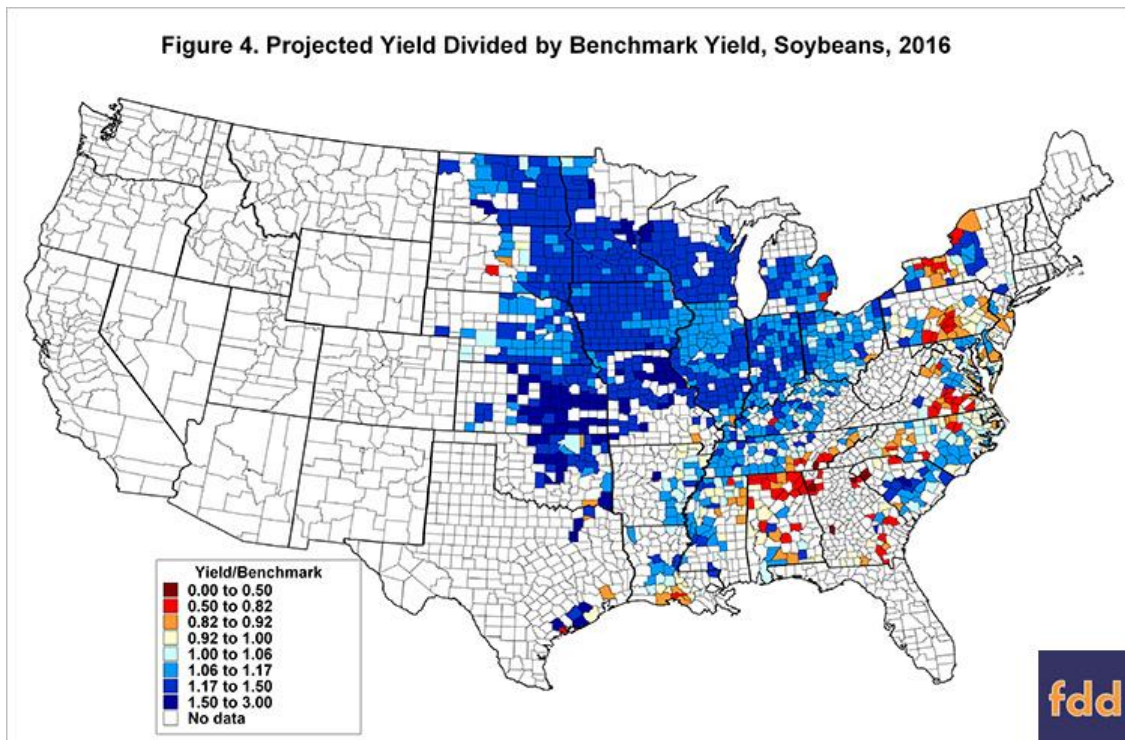
Sizable ARC-CO payments occur in some counties in eastern seaboard states: New York, Pennsylvania, Maryland, Delaware, Virginia, and North Carolina. Payments also occur in Louisiana, Mississippi, Alabama, and Tennessee (see Figure 3). Most counties in the Midwest are not projected to receive a payment.

Figure 3. 2016 ARC-CO County Payments for Soybeans, \$ Per Base Acre



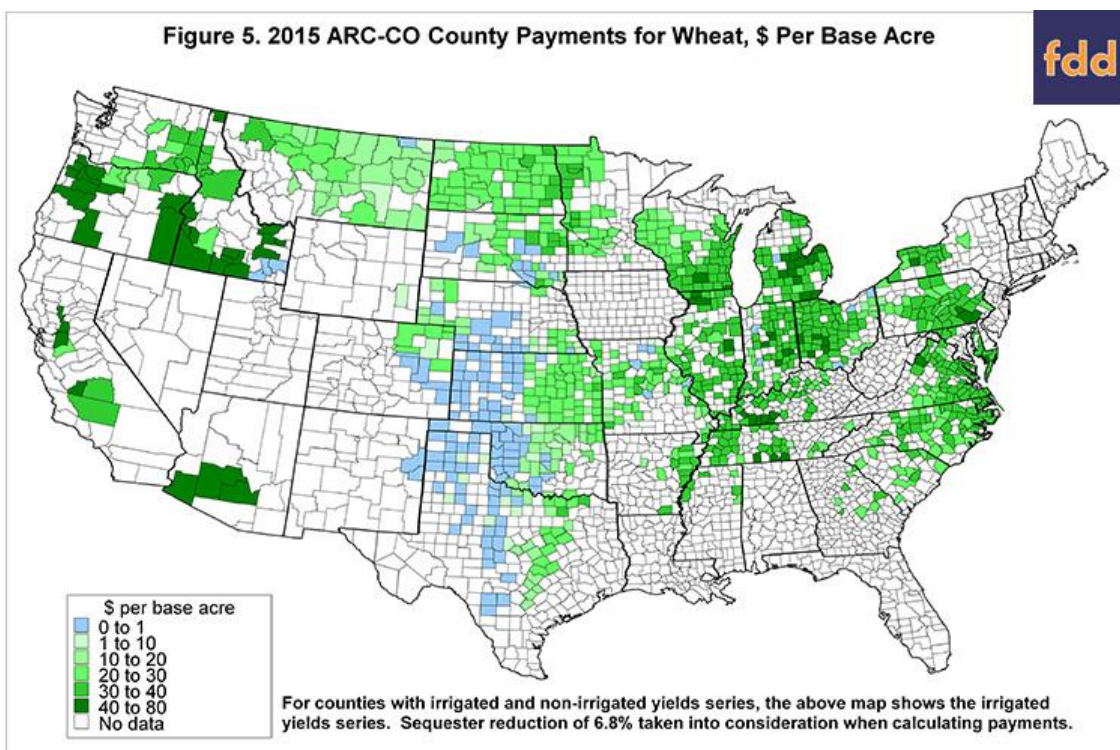
The 2016 MYA price used in projections is \$9.60 per bushel, 19% below the benchmark price of \$11.86. To receive a payment, the 2016 county yield must be higher than .92 of the benchmark yield (see the corn discussion for how this factor is determined). Most counties in the Midwest had exception yields,

resulting in county yields significantly above benchmark yields (see Figure 4). As a result, ARC-CO is not projected to make payments in the Midwest. Those areas with lower yields are projected to receive payments.

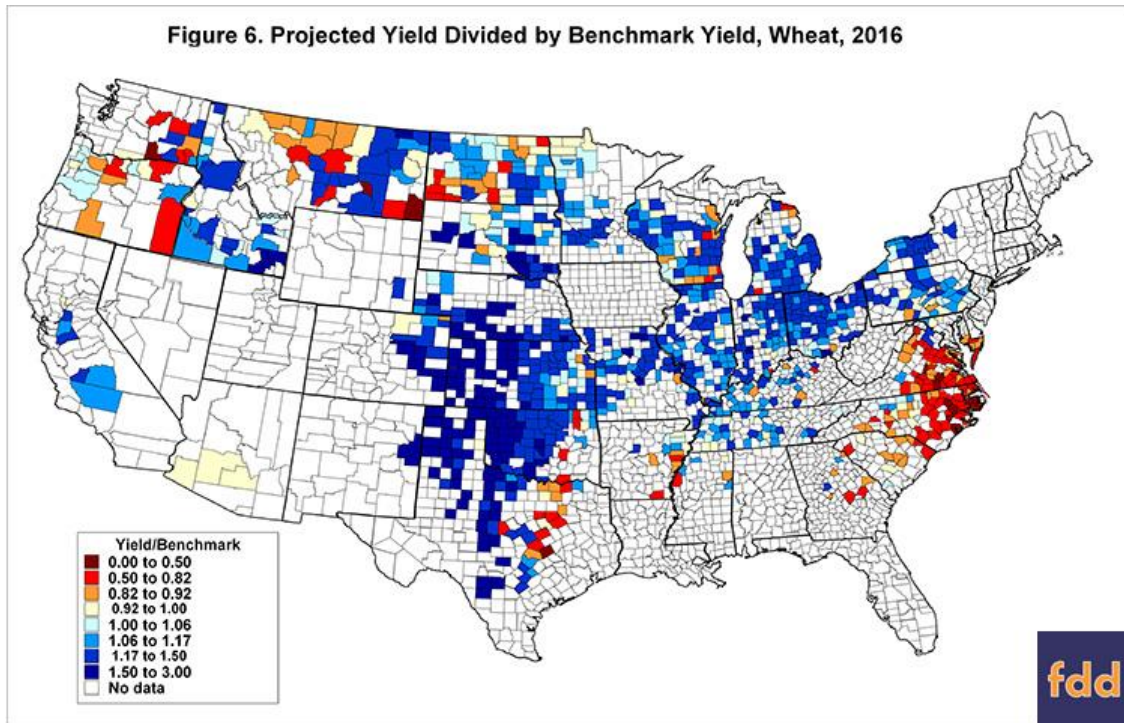


Wheat

Many counties in the United States are projected to have ARC-CO payments for wheat (see Figure 5). Exceptions are the heart of the wheat belt in Nebraska, Kansas, Oklahoma and Texas.



The 2016 projected price is 3.85, well below the benchmark price of \$6.70. Those counties not having ARC-CO payments have 2016 county yields that are 1.50 higher than the benchmark yield (see Figure 6) Obviously, these areas having exceptional yields are in the areas where no ARC-CO payments are occurring.



Illinois Payments

Estimated corn, soybeans, and wheat payments for Illinois counties are shown in Table 1.

Table 1. Projected 2016 ARC-CO Payments per Base Acre After Sequestration by Crop, Illinois. ^{1,2,3,4}

	Soy-				Soy-				Soy-		
	Corn	Beans	Wheat		Corn	Beans	Wheat		Corn	Beans	Wheat
Adams	0	0	11	Hardin	NA	0	NA	Morgan	4	0	35
Alexander	53	39	28	Henderson	0	0	NA	Moultrie	14	0	NA
Bond	NA	NA	NA	Henry	24	0	1	Ogle	0	0	40
Boone	50	0	24	Iroquois	0	0	35	Peoria	0	0	NA
Brown	0	0	NA	Jackson	56	NA	NA	Perry	49	0	NA
Bureau	42	0	NA	Jasper	28	0	33	Piatt	7	0	35
Calhoun	NA	NA	20	Jefferson	49	0	NA	Pike	0	0	33
Carroll	0	0	40	Jersey	45	0	32	Pope	57	39	NA
Cass	13	0	30	Jo Daviess	0	0	34	Pulaski	58	10	33
Champaign	0	0	42	Johnson	50	NA	NA	Putnam	0	0	22
Christian	27	0	35	Kane	6	0	39	Randolph	49	0	34
Clark	NA	NA	34	Kankakee	0	0	32	Richland	43	0	35
Clay	3	0	31	Kendall	1	NA	NA	Rock Island	6	0	NA
Clinton	37	0	33	Knox	0	0	34	St. Clair	38	0	33
Coles	NA	0	NA	Lake	57	0	30	Saline	60	0	32
Cook	0	NA	NA	LaSalle	21	0	NA	Sangamon	0	0	NA
Crawford	NA	0	32	Lawrence	NA	NA	32	Schuyler	0	0	28
Cumberland	27	0	35	Lee	11	0	37	Scott	0	0	NA
DeKalb	9	0	39	Livingston	0	0	35	Shelby	27	0	32
De Witt	38	5	NA	Logan	0	0	NA	Stark	4	0	36
Douglas	19	0	36	McDonough	0	0	14	Stephenson	12	0	40
DuPage	NA	NA	NA	McHenry	7	0	38	Tazewell	0	0	35
Edgar	28	0	NA	McLean	0	0	23	Union	51	0	NA
Edwards	55	0	32	Macon	5	0	1	Vermilion	0	0	NA
Effingham	60	0	33	Macoupin	0	0	NA	Wabash	57	0	25
Fayette	31	0	NA	Madison	13	0	33	Warren	0	0	NA
Ford	0	0	NA	Marion	56	0	36	Washington	54	0	37
Franklin	54	0	34	Marshall	19	0	NA	Wayne	NA	0	NA
Fulton	0	0	NA	Mason	NA	NA	NA	White	61	0	35
Gallatin	61	0	37	Massac	58	0	31	Whiteside	19	0	NA
Greene	0	0	32	Menard	23	0	NA	Will	NA	0	NA
Grundy	0	0	NA	Mercer	5	0	NA	Williamson	57	0	NA
Hamilton	56	0	NA	Monroe	46	0	33	Winnebago	27	0	37
Hancock	0	0	NA	Montgomery	0	0	NA	Woodford	0	0	33

1 Estimates are made per base acre and include a 6.8% sequestor reduction. Estimates are made using county yields released by NASS. NASS yields usually will be higher than FSA yields

2 Corn payments based on a \$3.50 MYA price

3 Soybean payemtns are based on a \$9.60 MYA price

4. Wheat payments are based on a \$3.85 MYA price

NA indicates that a county yield is not available.



Summary

Because final yields and prices are not yet known, actual ARC-CO payments are likely to vary from the estimates shown in this article. The final yields used in calculating payments can differ from the yields released by NASS, and will also cover additional counties in the US. The final MYA price levels for corn and soybeans will not be known with certainty until the marketing year ends in August. However, where NASS yields are available, estimates for the 2016 ARC-CO payment levels can be helpful for planning purposes.