



**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](mailto: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.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*



## Comparing ARC-CO and PLC Payments from 2014 to 2016

Nick Paulson, Jonathan Coppess, Gary Schnitkey

Department of Agricultural and Consumer Economics  
University of Illinois

Carl Zulauf

Department of Agricultural, Environmental and Development Economics  
Ohio State University

October 25, 2017

*farmdoc daily* (7):196

Gardner Policy Series

---

Recommended citation format: Paulson, N., G. Schnitkey, J. Coppess, and C. Zulauf. "Comparing ARC-CO and PLC Payments from 2014 to 2016." *farmdoc daily* (7):196, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 25, 2017.

Permalink: <http://farmdocdaily.illinois.edu/2017/10/comparing-arc-co-plc-payments-2014-to-2016.html>

---

The daily article from [October 13, 2017](#) provided a comparison of ARC-CO and PLC payments for 2016 for corn and wheat. Today's article provides county level comparisons for the two programs over the first three years of the current Farm Bill, 2014 to 2016, for corn, soybeans, and wheat.

### Corn

As shown in Table 1, the marketing year average price for corn declined from \$3.70/bu in 2014 to \$3.61 in 2015, and \$3.36 for 2016. With a \$3.70/bu reference price, no PLC payments were triggered for corn base in 2014, relatively small payments were triggered for 2015, and larger PLC payments will occur for 2016.

The ARC-CO benchmark price for corn has remained above actual MYA price levels for corn in all three years. Actual prices have been at roughly 70% of the ARC-CO benchmark each year (70% in 2014, 68% in 2015, and 70% in 2016), well below the 86% coverage level used for the ARC-CO program. Therefore, ARC-CO payments on corn base have occurred in some counties across all three years. Payment levels have varied across counties based on actual yield levels relative to each county's benchmark yield. In some areas, county average yields have been sufficiently high relative to the benchmark to completely offset low corn prices, leading to no ARC-CO payments for corn in those counties.

---

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](#).

**Table 1. ARC-CO and PLC Program Prices for Corn, 2014 to 2016**

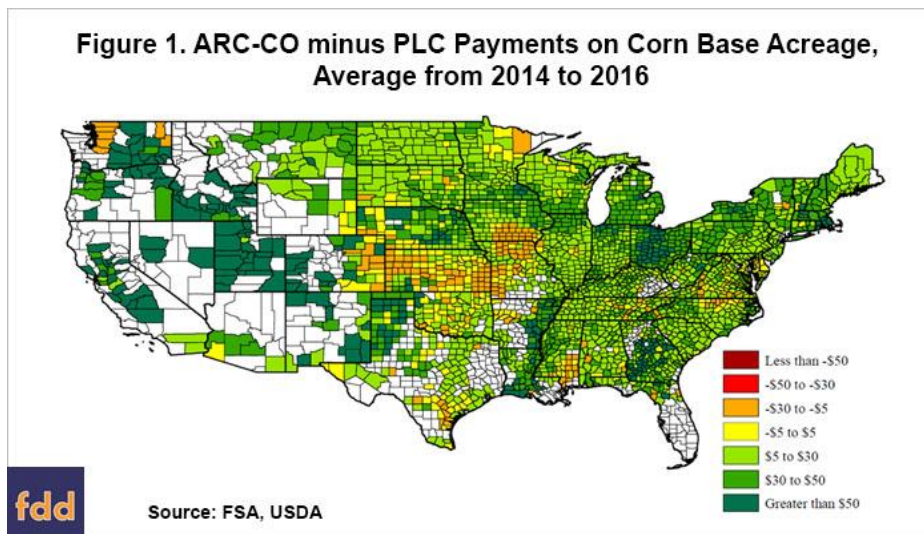
	PLC Reference Price	ARC-CO Benchmark Price	Actual MYA Price
2014	\$3.70/bu	\$5.29	\$3.70
2015	\$3.70/bu	\$5.29	\$3.61
2016	\$3.70/bu	\$4.79	\$3.36

Source: FSA, USDA

Figure 1 compares the average payments from the ARC-CO and PLC programs on corn base acres over the 2014 to 2016 years. For each county, the value depicted in the map is the difference between the average annual ARC-CO payment and the average annual PLC payment. The annual payments from both counties were adjusted for the 6.8% federal budget sequester, as well as the 85% payment rate. Therefore the payments should be interpreted as the payment received per base acre. Also, for counties with programs for both irrigated and non-irrigated acreage, the payments for irrigated acreage were used. The simple average of the payments per base acre were computed, and the values depicted in the map figures are the average ARC-CO payment minus the average PLC payment per base acre.

Counties in orange or red represent areas where the PLC program has resulted in larger average payments, while counties in green represent areas where ARC-CO payments have, on average, been larger over the three year period. For corn, the ARC-CO program has resulted in larger average payments for the majority (nearly 90%) of counties with corn base acreage. Exceptions include southcentral Iowa, northern and western Missouri, and the majority of counties in Kansas, along with other counties scattered across the country. These represent areas where county yields have been sufficiently high enough to partially or fully offset the effect of low prices on ARC-CO payment levels. Notably, county yields have been high enough to result in zero ARC-CO payments on corn base in just under 5% of the counties for which FSA provides program data.

**Figure 1. ARC-CO minus PLC Payments on Corn Base Acreage, Average from 2014 to 2016**



## Soybeans

Table 2 shows that the actual MYA average price for soybeans has remained above the \$8.40 PLC reference price for all three years, resulting in no PLC program payments on soybean base acreage.

Similar to corn, the MYA price for soybeans has been less than 86% of the ARC-CO benchmark price each year, meaning that actual county yields at or below the county's benchmark yield would result in ARC-CO payments each year. Soybean base did not receive payments from ARC-CO only in those areas where soybean yields have been sufficiently above the benchmark yield in that county to offset price declines.

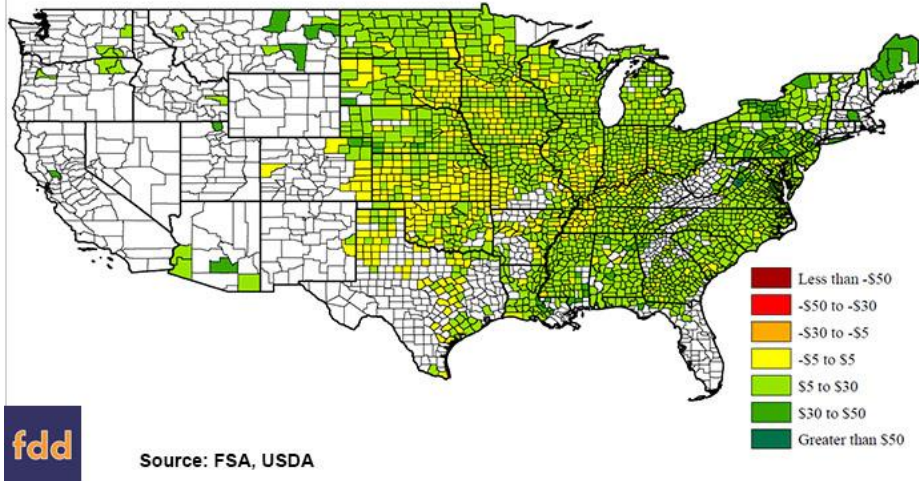
**Table 2. ARC-CO and PLC Program Prices for Soybeans, 2014 to 2016**

	PLC Reference Price	ARC-CO Benchmark Price	Actual MYA Price
2014	\$8.40/bu	\$12.27	\$10.10
2015	\$8.40/bu	\$12.27	\$8.95
2016	\$8.40/bu	\$11.87	\$9.47

Source: FSA, USDA

Figure 2 provides the comparison of average ARC-CO and average PLC payments per base acre from 2014 to 2016 for soybeans. Note that since no PLC payments have been triggered on soybean base acres, all areas of the country are in the yellow or green categories. The lowest average ARC-CO payment levels have occurred in southern IL, Kansas, South Dakota, and parts of Iowa, Missouri, and Minnesota. Average soybean yields have been sufficiently high enough to result in no ARC-CO program support since 2014 in just over 14% of counties with program data.

**Figure 2. ARC-CO minus PLC Payments on Soybean Base Acreage, Average from 2014 to 2016**



## Wheat

The MYA price for wheat was above the \$5.50/bu reference price in 2014, but declined in 2015 and 2016 triggering PLC payments on wheat base in both years. As with corn and soybeans, the MYA price for wheat has been less than 86% of the ARC-CO benchmark price across all three years. Also similar to corn and soybeans, ARC-CO payments on wheat were triggered in all three years except for areas where the average county yield was sufficiently above the county's benchmark.

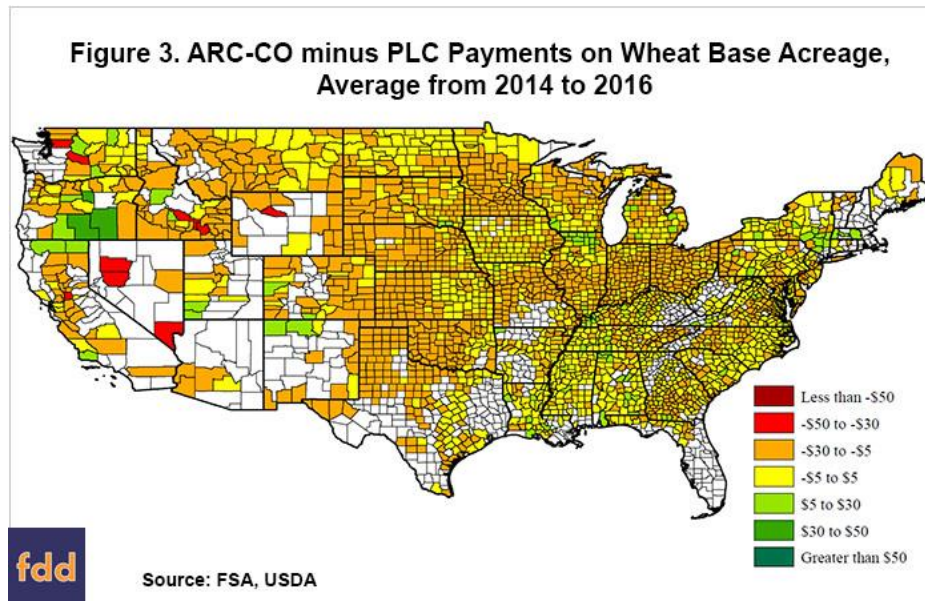
**Table 3. ARC-CO and PLC Program Prices for Wheat, 2014 to 2016**

	PLC Reference Price	ARC-CO Benchmark Price	Actual MYA Price
2014	\$5.50/bu	\$6.60	\$5.99
2015	\$5.50/bu	\$6.70	\$4.89
2016	\$5.50/bu	\$6.70	\$3.89

Source: FSA, USDA

Figure 3 shows that the majority (81%) of counties with wheat base acreage would have received larger payments, on average, from the PLC program. Exceptions are scattered throughout the country, with a more concentrated region of counties in northern IL that have received larger ARC-CO payments per

base acre over the past 3 years. Just 2.9% of the counties where wheat program data is provided have not triggered any ARC-CO support since 2014. In most areas, prices have been sufficiently low to triggers payments from both programs, but PLC has tended to result in a larger annual payment per base acre on average. This is true despite the fact that no PLC payments were triggered on wheat base for 2014.



## Summary

This article compares average annual payments per base acre that have been triggered by the ARC-CO and PLC programs since 2014 differs across corn, soybeans, and wheat. For all three crops, prices have been below 86% of the ARC-CO benchmark price in all three years, but yields have been sufficiently high in some counties to reduce, partially or fully, the size of ARC-CO payment levels. Corn and wheat prices have been low enough in 2015 and 2016 to trigger payments on base acreage enrolled in the PLC program, but soybean prices have remained above the PLC reference price in all three years.

In general, the majority of corn base acres enrolled in the ARC-CO program would have received a greater level of support from that program when compared to the average payment which would have been received through the PLC program. Exceptions exist in areas where actual county yields have been sufficiently above benchmark yields.

Because soybean prices have remained above the PLC reference price, the ARC-CO program has provided larger average payments in all areas. There are, however, some counties where average soybean yields have high enough to result in no ARC-CO payments over the 2014 to 2016 years.

For wheat, the majority of farms with wheat base enrolled in the PLC program have received greater support since 2014 compared to what would have been received from the ARC-CO program. Wheat prices have been low enough to trigger payments from both programs in most areas, with less than 3% of counties having high enough yields in all three years to result in zero ARC-CO program payments. However, yields have been high enough in the majority of counties to result in smaller ARC-CO payments, on average, than what would have been triggered by the PLC program on those acres. This is true despite wheat prices being low enough to trigger PLC payments in just 2 out of the past 3 years.

## References

Farm Service Agency (FSA), United States Department of Agriculture. ARC/PLC Program Data. [https://www.fsa.usda.gov/programs-and-services/arcplc\\_program/arcplc-program-data/index](https://www.fsa.usda.gov/programs-and-services/arcplc_program/arcplc-program-data/index)

Farm Service Agency (FSA), United States Department of Agriculture. 2016 Program Year Data for PLC. [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2016\\_plc.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2016_plc.pdf)

Farm Service Agency (FSA), United States Department of Agriculture. 2015 Program Year Data for PLC.  
[https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2015\\_plc.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2015_plc.pdf)

Farm Service Agency (FSA), United States Department of Agriculture. 2014 Program Year Data for PLC.  
[https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2014\\_plc.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/arc-plc/pdf/2014_plc.pdf)

Paulson, N., G. Schnitkey, J. Coppess, and C. Zulauf. "Comparison of 2016 ARC-CO and PLC Payments." *farmdoc daily* (7):188, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 13, 2017.