



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.*



Indicated ARC-CO and PLC Payment for 2014 Crop Year Corn, Soybeans, and Wheat by State: January 2014

Carl Zulauf and Sanghyo Kim

Department of Agricultural, Environmental and Development Economics
Ohio State University

Gary Schnitkey

Department of Agricultural and Consumer Economics
University of Illinois

January 22, 2015

farmdoc daily (5):12

Recommended citation format: Zulauf, C., S. Kim, and G. Schnitkey. "[Indicated ARC-CO and PLC Payment for 2014 Crop Year Corn, Soybeans, and Wheat by State: January 2014.](#)" *farmdoc daily* (5):12, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 22, 2015.

Permalink <http://farmdocdaily.illinois.edu/2015/01/indicated-arc-co-and-plc-payment-2014-crop-year.html>

This article provides payment indicators for ARC-CO and PLC based on the [January 12, 2015 WASDE](#) (*World Agricultural Supply and Demand Estimates*) mid-price estimate and NASS's (National Agricultural Statistical Service) crop production annual reports for corn, soybeans, and wheat. The term, payment indicator, is used because the estimates use state yield not the county yield used by ARC-CO or farm payment yield used by PLC. Thus, the indicators are not estimates of payments an individual FSA farm will receive. Nevertheless, they should help frame perspectives and questions regarding crop program choices. Previous estimates exist for the U.S. and are available at the *farmdoc daily* articles of [August 13](#), [September 18](#), [October 14](#), and [December 18](#), 2014.

Calculation of Estimated Payment Indicators

ARC-CO makes a payment if county revenue is below 86% of the county's benchmark revenue. Benchmark revenue is obtained by multiplying 5-year Olympic moving averages (removes high and low values) of county yield and U.S. crop year price. ARC-CO payments are capped at 10% of the benchmark revenue. PLC makes payments when U.S. crop year average price is less than the crop's reference price. Congress specified the reference price in the 2014 farm bill.

Both programs use yield per planted, not harvested acre. Yield per planted acre is calculated as production divided by acres planted to the crop, except for corn. For corn, acres harvested for silage are subtracted from planted acres. Note that information is not available for all states to make yield per planted acre calculations.

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](#).

The estimated per acre payment use the mid-price estimate, which is obtained by averaging the low and high end of the price range projected in the January 2015 WASDE. The mid-price estimates are \$3.65, \$10.20, and \$6.10 for corn, soybeans, and wheat, respectively. Estimated per acre payments are adjusted for the program parameter that ARC-CO and PLC payments are made on 85%, not 100%, of program base acres (ARC-IC pays on 65% of base acres).

State per acre Payment Indicator for 2014 Crop Year Corn

Indicated ARC-CO payments per acre vary from \$0 to \$97 (Washington) (see Figure 1). No ARC-CO payment is indicated for 8 of the 41 states for which information exist, including the top 10 corn production states of Kansas and Missouri. The range of ARC-CO indicated payments underscores the significance of yield in determining payments by ARC. For example, Illinois has an indicated payment of \$6 per acre while neighboring Iowa has an indicated ARC-CO payment of \$74 per acre. Their ARC benchmark yields are close, 161 for Illinois and 165 for Iowa, but their yield per planted acre for the 2014 corn crop is 177 for Iowa vs. 199 for Illinois.

PLC payments are made for each state because the U.S. corn crop year price, currently projected at \$3.65 for corn, is less than the corn reference price, \$3.70. PLC payments exceed ARC-CO payments for 10 of the 41 states for which information exist. Compared with ARC-CO, the range in indicated PLC payments is much narrower, ranging from \$3 for South Carolina to \$8 for Washington. The reason is that an average of yields (for 2008-2012) is used to calculate PLC payments. In contrast, current, or 2014 crop year yields, are used when calculating ARC-CO payments. Yields vary much more for a single year than when averaged over multiple years.

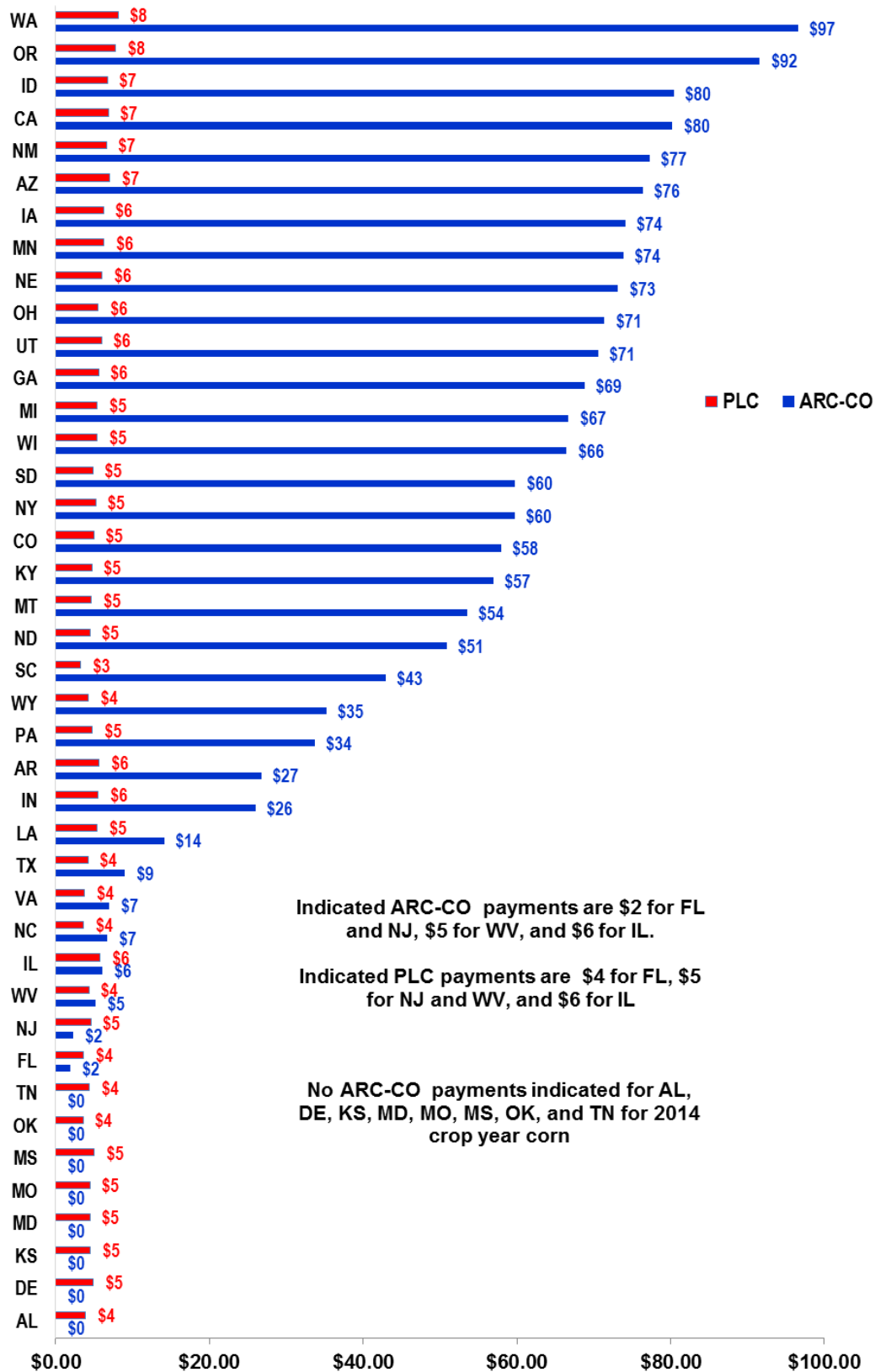
State per acre Payment Indicator for 2014 Crop Year Soybeans

ARC-CO payments are indicated for 7 of the 31 states for which information is available, including the top 10 producing states of Minnesota and Nebraska. New York has the highest indicated payment of \$20 per acre. The states with an indicated payment had 2014 yields that were relatively low compared with their benchmark yields. While the 2014 soybean crop year price is less than the soybean benchmark price, the 2014 soybean price is not low enough relative to its price benchmark to trigger widespread payments. No PLC payment is indicated since the projected 2014 mid-price estimate of \$10.20 is higher than the soybean reference price of \$8.40.

State per acre Payment Indicator for 2014 Crop Year Wheat

ARC-CO payments are indicated for 12 of the 42 states for which information is available, including the top 10 producing states of Kansas, Texas, and Washington. Washington has the highest indicated payment, \$37 per acre. The states with an indicated payment had 2014 yields that were relatively low compared with their benchmark yields. While the 2014 wheat crop year price is less than the wheat benchmark price, the 2014 wheat price is not low enough relative to its price benchmark to trigger widespread payments. No PLC payment is indicated since the projected 2014 mid-price estimate of \$6.10 is higher than the wheat reference price of \$5.50.

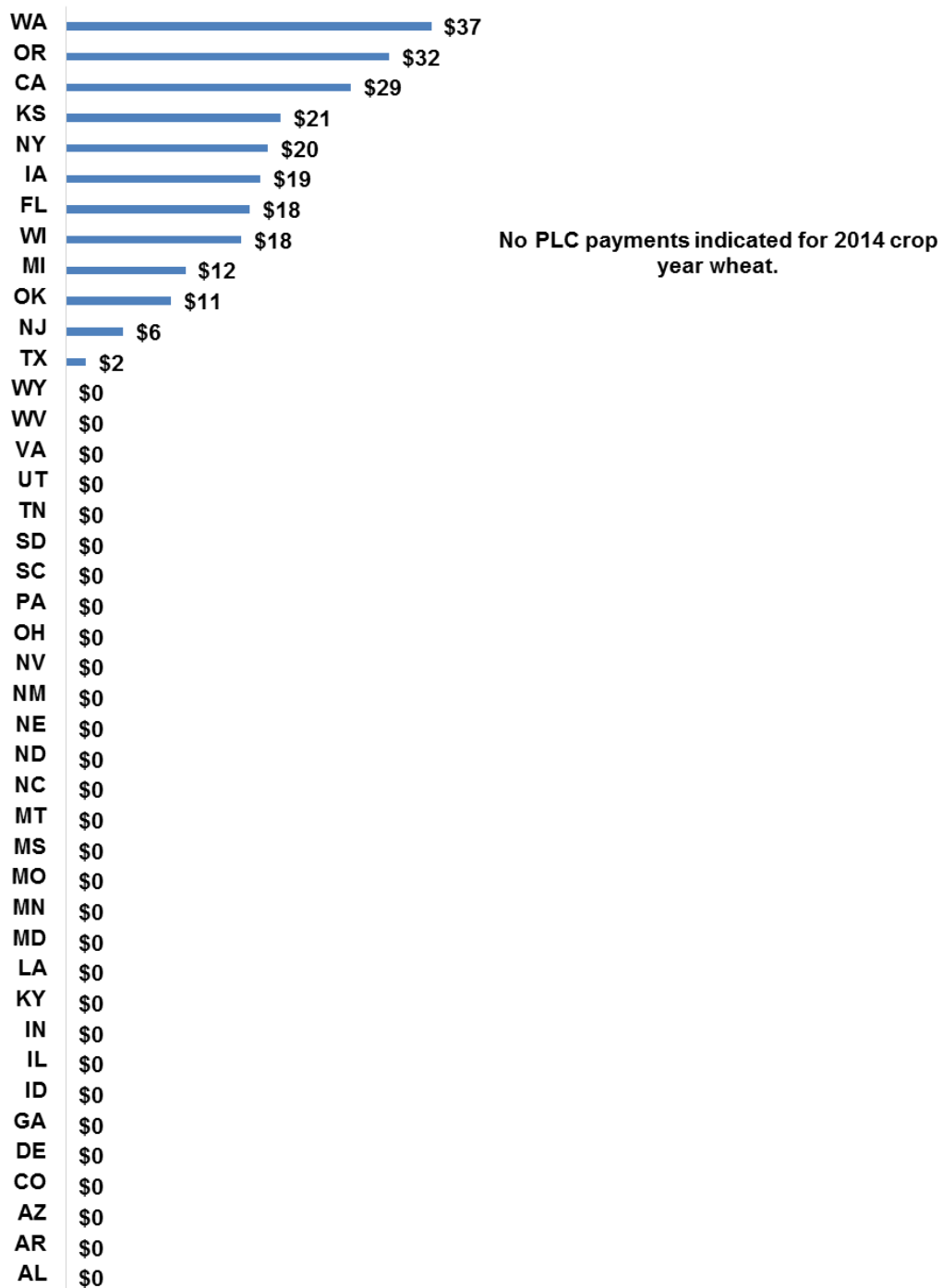
Figure 1. ARC-CO and PLC Payment Indicator, States with Information, 2014 Crop Year Corn



**Figure 2. ARC-CO Payment Indicator, States with Information,
2014 Crop Year Soybeans**



**Figure 3. ARC-CO Payment Indicator, States with Information,
2014 Crop Year Wheat**



Summary Observations

- For corn, ARC-CO is currently projected to make a higher payment than PLC for most, but not all, states. Exceptions exist because 2014 yield is high enough to offset the lower 2014 price compared with the ARC benchmark price.
- ARC-CO is currently indicated to make payments for soybeans and wheat in some states, with a key factor being how the state's 2014 yield compares with its ARC benchmark yield.
- The indicated payment estimates clearly underscore that ARC is a revenue, not a price, program. Yield, not just price, is a key determinant of ARC payments.
- PLC's single focus is price. Yield can offset or enhance the degree of risk resulting from price. Low price does not necessarily mean low revenue, just as high price does not necessarily mean high revenue. Revenue is a broader measure of financial wellness than price. Understanding the distinction between price and revenue is important to making an informed decision between ARC and PLC. The focus of ARC is multiple years of shallow revenue risk with a benchmark of the previous 5 years, as modified by the use of a reference price floor; whereas PLC's focus is the risk of multiple years of prices notably below a benchmark known as the reference price.
- IMPORTANT CAVEAT: Considerable uncertainty exists regarding actual 2014 crop year payments, if any, by ARC and PLC. The reasons are that county yields are largely not available yet and that considerable uncertainty remains over the 2014 crop year average price. For a more extensive discussion of the latter topic, see the [January 8, 2015 *farmdoc daily* article](#).

References

USDA Office of the Chief Economist. "World Agricultural Supply and Demand Estimates (WASDE)." Released January 12, 2015. <http://www.usda.gov/oce/commodity/wasde/index.htm>

Zulauf, C., and A. Hershey. "[2014 Crop Program Decision: March WASDE Price Uncertainty](#)." *farmdoc daily* (5):3, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 8, 2015.

Zulauf, C. and G. Schnitkey. "[ARC-CO and PLC Payment Indicator for 2014 Crop Year: December 2014 WASDE U.S. Yield and Price](#)." *farmdoc daily* (4):242, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 18, 2014.

Zulauf, C., and G. Schnitkey. "[ARC-CO and PLC Payment Indicator for 2014 Crop Year: October 2014 WASDE U.S. Yield and Price](#)." *farmdoc daily* (4):198, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 14, 2014.

Zulauf, C., and G. Schnitkey. "[ARC-CO and PLC Payment Indicator for 2014 Crop Year: September 2014 WASDE U.S. Yield and Price](#)." *farmdoc daily* (4):180, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 18, 2014.

Zulauf, C., and G. Schnitkey. "[ARC-CO and PLC Payment Indicator Using August WASDE U.S. Yield and Price](#)." *farmdoc daily* (4):151, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 13, 2014.

This publication is also available at <http://ohioagmanager.osu.edu>