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## ARC-CO and PLC Payment Indicator for 2014 Crop Year: September 2014 WASDE U.S. Yield and Price

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September 18, 2014

*farmdoc daily* (4):180

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Recommended citation format: Zulauf, C., and G. Schnitkey. "[ARC-CO and PLC Payment Indicator for 2014 Crop Year: September 2014 WASDE U.S. Yield and Price.](http://farmdocdaily.illinois.edu/2014/09/arc-co-and-plc-payment-indicator-Sep-2014-wasde.html)" *farmdoc daily* (4):180, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 18, 2014.

Permalink URL

<http://farmdocdaily.illinois.edu/2014/09/arc-co-and-plc-payment-indicator-Sep-2014-wasde.html>

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This article updates our August 12, 2014 *farmdoc daily* article, "ARC-CO and PLC Payment Indicator Using August WASDE U.S. Price and Yield." The update reflects U.S. yield and U.S. price estimates in the September 11, 2014 *World Agricultural Supply and Demand Estimates* (WASDE) for barley, corn, oats, long grain rice, medium (and short) grain rice, sorghum, soybeans, and wheat. The estimated payments for ARC-CO and PLC are indicator estimates because they use U.S. yield not the county yield used by ARC-CO or farm payment yield used by PLC. The estimates are not payments an individual FSA farm owner will receive. Nevertheless, the indicator estimates using U.S. yields should help frame perspectives and questions for FSA farm owners regarding program choices.

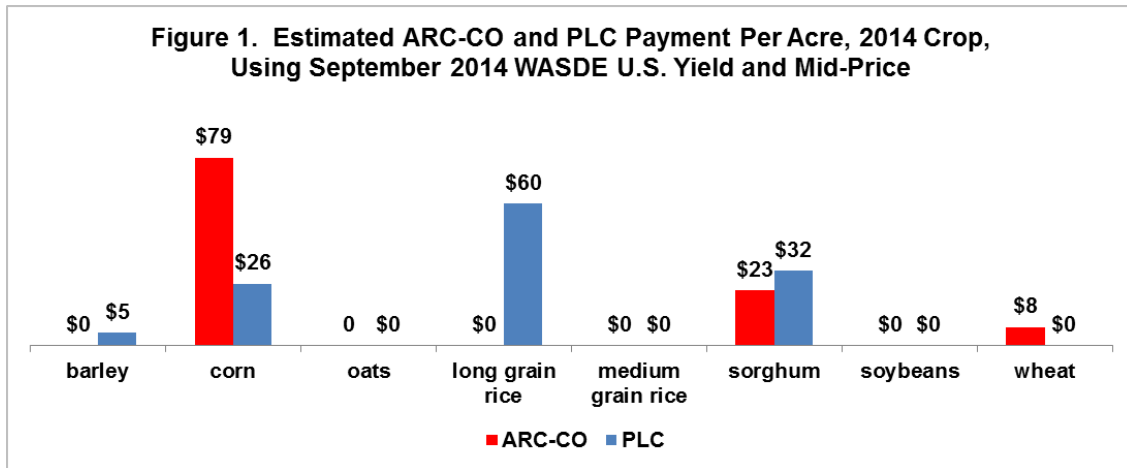
### Calculation of Estimated Indicator Program Payments

ARC-CO makes payments when county revenue falls between 76% and 86% of the county's benchmark revenue. The benchmark revenue is based on a 5-year Olympic moving average (removes high and low values) of county yield and U.S. crop year price. PLC makes payments when the U.S. crop year average price is less than the crop's reference price. The reference price is specified by Congress in the 2014 farm bill. For an extended discussion of various topics related to these two programs and their calculations, see the August *farmdoc daily* article referenced above. Topics include the calculation of yield per planted acre and payments by ARC-CO and PLC, as well as the third program option, ARC-IC (ARC-individual farm).

### U.S. Per Acre Payment Indicator – September 2014 WASDE Mid-Price for 2014 Crop Year (see Figure 1)

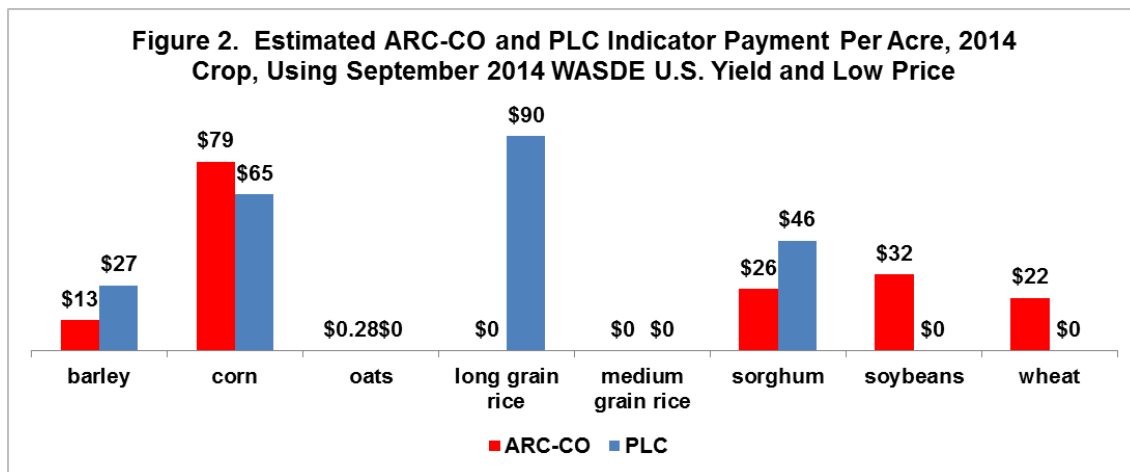
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ARC-CO payments are indicated for corn, sorghum, and wheat. PLC payments are indicated for barley, corn, long grain rice, and sorghum. Indicated payment is highest for corn from ARC-CO at \$79 per acre, with long grain rice from PLC next highest at \$60 per acre. For comparison, the mid-price in the August WASDE indicated payments of \$41 per acre from ARC-CO for corn and \$60 per acre from PLC for long grain rice. From August to September, projected mid-price declined from \$3.80 to \$3.50 per bushel for corn but increased from \$12.50 to \$13.00 per 100 pounds for long grain rice. These comparisons indicate how sensitive payment estimates currently are due to changes in prices and yields. Thus, these indicated payments should be treated with caution. The decline in projected 2014 crop year mid-price for corn now means PLC payments are projected at \$26 per acre. Corn's mid-price of \$3.50 is below its \$3.70 reference price. Remember, actual payments depend upon county yield for ARC-CO and FSA farm payment yield for PLC, and payment is made on only 85% of base acres (65% for ARC-IC).

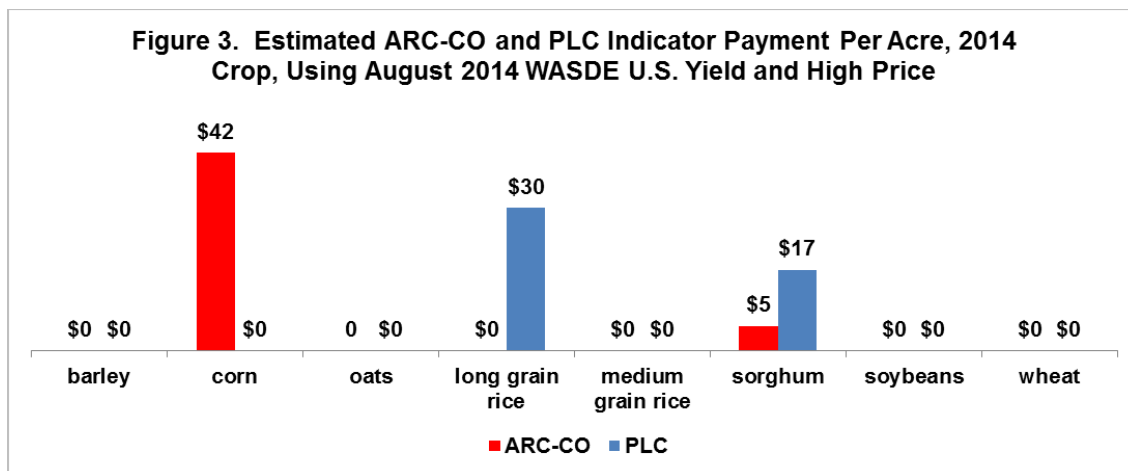
**U.S. Per Acre Payment Indicator – September 2014 WASDE Low Price for 2014 Crop Year (see Figure 2)**



When the low price of the September WASDE projected range of crop year prices is used, only medium/short grain rice has no payment indicated (oats has a payment of \$0.28 per acre from ARC-CO, which rounds to \$0). The highest per acre payment indicated is \$90 for long grain rice by PLC, with the next highest being \$79 for corn by ARC-CO. ARC-CO has no payment indicated for long grain rice. PLC has no payment indicated for oats, soybeans, and wheat. ARC-CO's indicated payments are \$32 per acre for soybeans and \$22 per acre for wheat. Both programs have payments indicated for barley, corn, and sorghum. Higher of the two payments is ARC-CO for corn and PLC for barley and sorghum.

Note that payment per acre by ARC-CO for corn is \$79 per acre for both the low price and mid-price. The reason is that, even though price is lower, ARC-CO's payment is capped at 10 percentage points of revenue, (that is, between 76% and 86% of the ARC-CO revenue benchmark). Also note for sorghum the difference between indicated payments by ARC-CO and PLC increased substantively from the mid-price calculation to the low price calculation. The reason is that ARC-CO payment hits its cap or maximum value of \$26 per acre. In contrast, PLC has a much higher cap, which is determined by the difference between the reference price and loan rate. Again, remember, actual payments depend upon county yield for ARC-CO and FSA farm payment yield for PLC, and payment is made on only 85% of base acres (65% for ARC-IC).

**U.S. Per Acre Payment Indicator – September 2014 WASDE High Price for 2014 Crop Year (see Figure 3)**



Corn – ARC-CO, long grain rice – PLC, and sorghum (both programs) had a payment indicated if the high price of the September WASDE price range materializes. Since payments are indicated for these crop-program combinations at the high price scenario, the likelihood of these payments is higher. However, payments are not 100% certain as U.S. season average prices can increase and, for ARC-CO, very high county yields may offset lower prices.

**Summary Observations**

- As of September 11, 2014, corn, long grain rice, and sorghum are the most likely covered crops examined in this article to receive a payment for the 2014 crop year.
- Whether or not ARC-CO or PLC is likely to make a payment varies by crop.
- Lower prices increase the likelihood of payments, especially from ARC-CO. However, because of the 10 percentage point cap on ARC-CO's coverage range, lower prices will not likely increase payments by ARC-CO for corn and only slightly for sorghum.
- County yield is a factor in determining 2014 payments by ARC-CO given currently expected prices.
- Payments are far from certain for both ARC-CO and PLC if prices strengthen due to lower production or higher demand.
- Comparison of payments under the current low, mid, and high prices in the September 2014 WASDE reveals some of the tradeoffs that need to be considered when choosing between ARC-CO and PLC. They include that ARC-CO payments are based on a benchmark revenue that follows the market, which increases the likelihood that ARC-CO will make payments in 2014 because 2014 prices are lower than the high prices of recent years. However, the cap on payments is smaller for ARC-CO than for PLC, which means that the potential payment by PLC is higher, although actual payment may be smaller. Two tradeoffs not illustrated are (1) that ARC-CO's benchmark will eventually trend lower if prices remain low although this downward adjustment is tempered because ARC-CO has the PLC reference price as a minimum price and (2) that ARC-CO pays on price and yield declines while PLC pays if price is below the reference price. FSA farm

owners' preferences among these tradeoffs are important considerations in determining which program they will choose.

## References

USDA Office of the Chief Economist. "World Agricultural Supply and Demand Estimates (WASDE)." Released September 11, 2014. <http://www.usda.gov/oce/index.htm>

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.

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