



ARC-CO and PLC Payments for 2014 and 2015: Review, Comparison, and Assessment

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March 9, 2017

farmdoc daily (7):44

Recommended citation format: Zulauf, C., G. Schnitkey, J. Coppess, and N. Paulson. "ARC-CO and PLC Payments for 2014 and 2015: Review, Comparison, and Assessment." *farmdoc daily* (7):44, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, March 9, 2017.

Permalink: <http://farmdocdaily.illinois.edu/2017/03/arc-co-and-plc-payments-for-2014-2015-review.html>

Debate has begun on the next farm bill. A key debate item will be the safety net programs in the commodities title. Roughly 99% of base acres of covered commodities are enrolled in the ARC-CO (Agriculture Risk Coverage -County) and PLC (Price Loss Coverage) safety net programs authorized in the 2014 farm bill. Base acres are land with historical planting of the covered commodities. Payments per base acre made for the 2014 and 2015 crop years vary more for PLC than ARC-CO across the covered commodities. Per base acre payments for ARC-CO and PLC are not highly correlated, which is consistent with different risks being covered. The latter observation suggests that a question for the next farm bill is whether combining the two programs may be desirable as a policy option. Farmers would not have to choose which risk they want to cover. Rather than ARC or PLC, an individual could choose to have a 50-50 program with 50% of base acres in ARC and 50% in PLC. This choice would result in a blended risk protection between ARC and PLC.

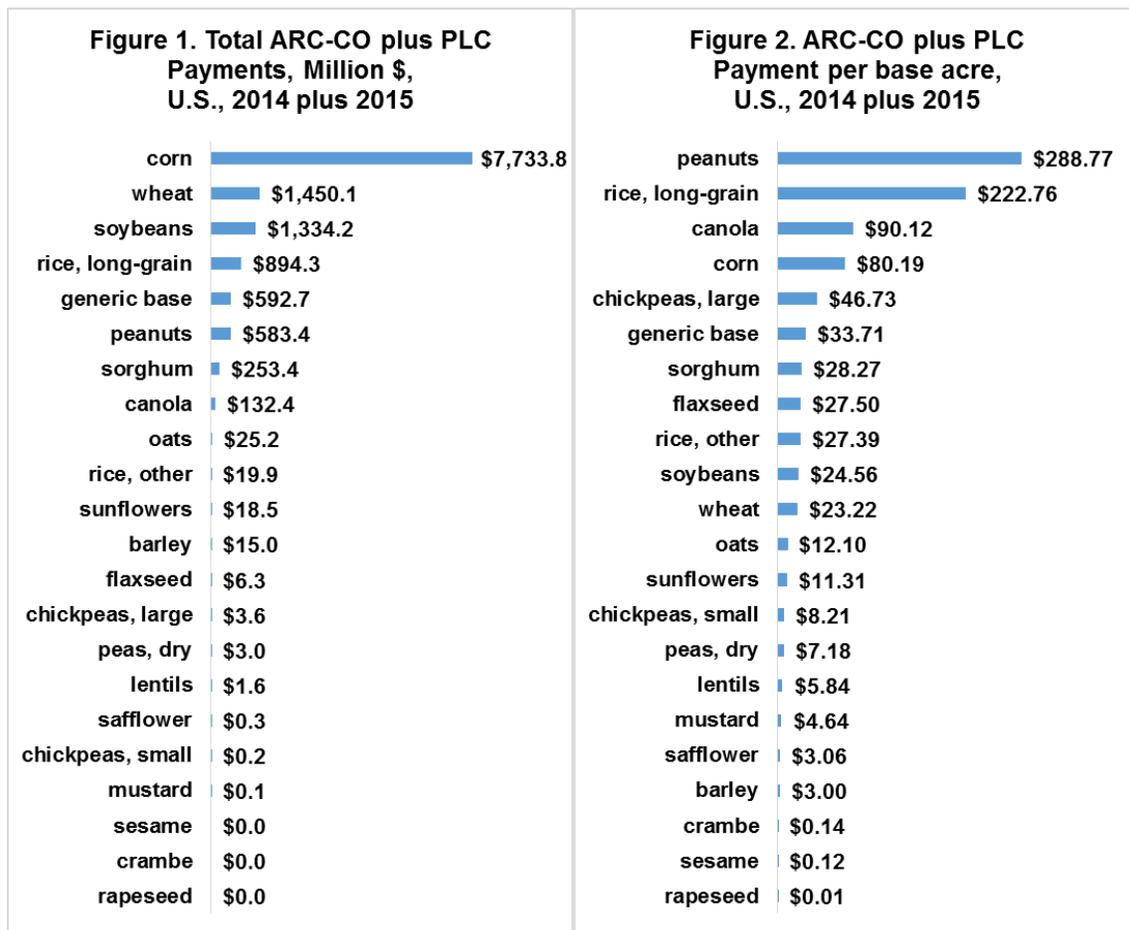
Program Background: ARC has two versions: ARC-CO and ARC-IC (individual farm). ARC-CO makes a payment if county revenue is below 86% of the county's benchmark revenue. ARC-IC makes a payment if the average per acre actual revenue based on all program crops planted on the ARC-IC farm is below 86% of the ARC-IC farm's benchmark revenue per acre. Benchmark revenues for both ARC-CO and ARC-IC are determined using 5-year Olympic moving averages (high and low values removed) of U.S. crop year price and county (ARC-CO) or farm (ARC-IC) yield. Both ARC versions cap payments at 10% of benchmark revenue. In contrast, PLC makes payments on a fixed base yield when U.S. crop year price is less than the crop's fixed reference price specified in the 2014 farm bill. Payment is made on 85% of base acres under ARC-CO and PLC but on 65% of base acres by ARC-IC.

Besides the usual program crops, program payments are made on "generic base". Generic base is former cotton base acres. On generic base acres, payments can be received for other program crops if they are planted on a FSA farm which has former cotton base. To avoid double counting, payments to a program crop planted on generic base are removed from that crop's payments.

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Total ARC-CO and PLC Payments: According to U.S. Department of Agriculture, Farm Service Agency data, ARC-CO plus PLC payments totaled \$13.1 billion for crop years 2014 and 2015 (see Table 1 and Figure 1). Corn base acres received \$7.7 billion, or 59% of these payments. Wheat, soybeans, long-grain rice, generic base, and peanuts also received more than \$0.5 billion on their base acres. In terms of total ARC-CO and PLC payments, corn, wheat, and soybeans received the most because of their large base acres. In rank order, corn, soybeans, and wheat have 96.4, 62.4, and 54.3 million base acres in ARC-CO plus PLC, respectively. The categories with the next highest payments have considerably fewer ARC-CO plus PLC base acres. Long-grain rice, generic base, and peanuts have 4.0, 17.6, and 2.0 million base acres, respectively.

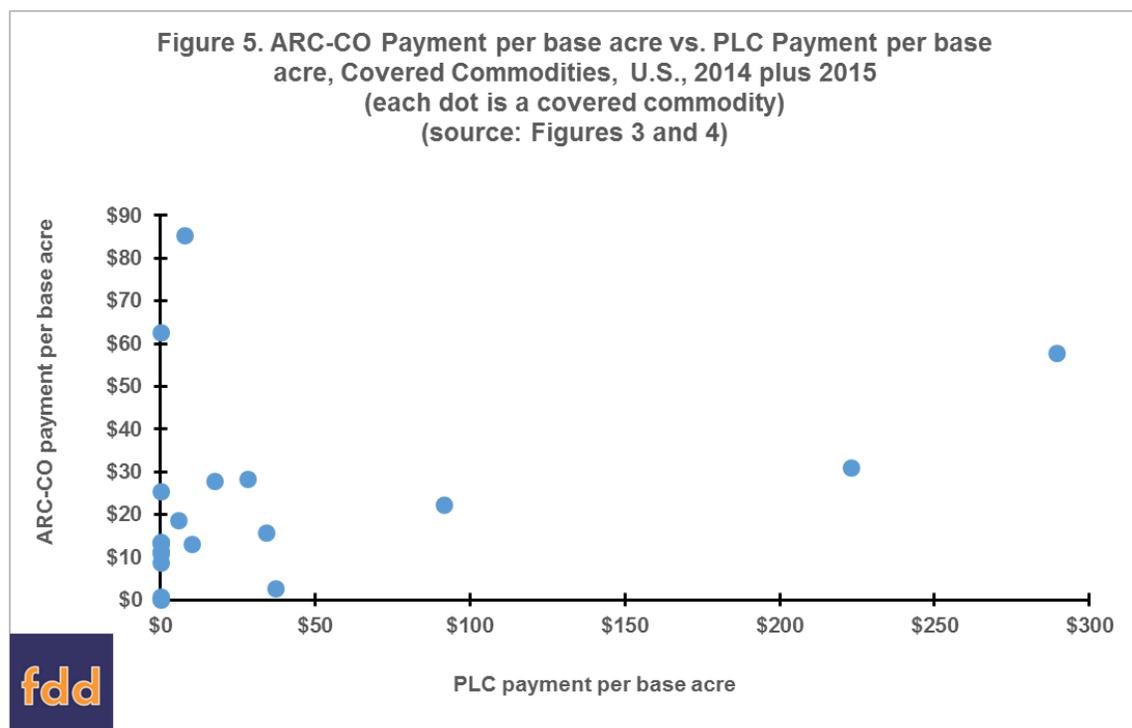
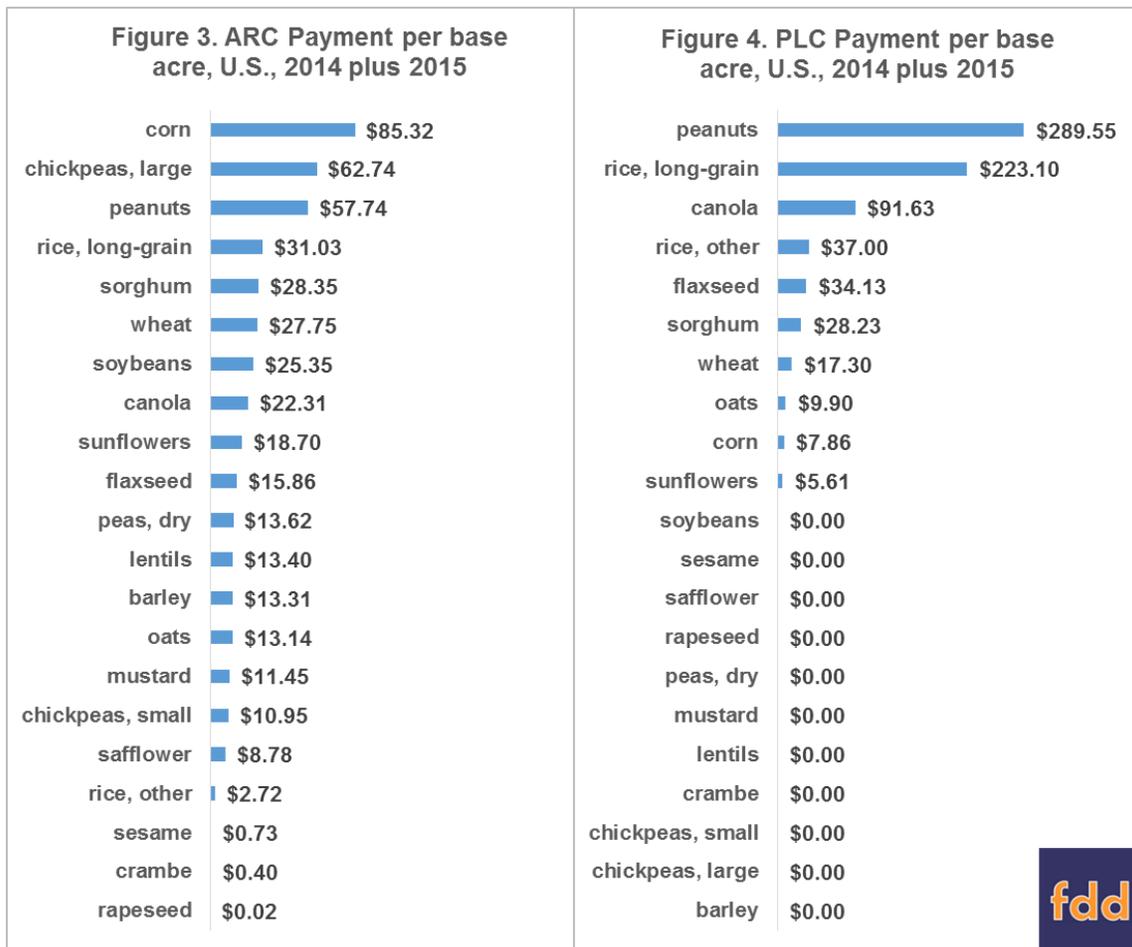
ARC-CO plus PLC Payment per base acre: Rank order of the covered commodities, including generic base, is notably different when arranged by 2014 plus 2015 payment per base acre (see Table 1 and Figure 2). Payment per base acre is highest for peanuts (\$289) and long-grain rice (\$223). Canola (\$94), corn (\$80), and large chickpeas (\$47) round out the five highest. Payment per generic base acre is \$34, 6th highest.



ARC-CO vs. PLC Payment per base acre: Payment per base acre summed over the 2014 and 2015 crop years varies more across program crops for PLC (generic base is not included in this discussion). ARC-CO has made payments to all covered commodities; however, payments to rapeseed, crambe, and sesame round to \$0 per base acre (see Figure 3). In contrast, PLC has made no payment to 11 of the 21 crops, including soybeans (see Figure 4). Range of payments is also smaller for ARC-CO. Highest payment per base acre is \$85 (corn) for ARC-CO compared with \$290 (peanuts) for PLC.

Relationship between ARC-CO and PLC Payment per base acre: A relatively low degree of correlation exist between ARC-CO and PLC payment per base acre for the 2014 plus 2015 crop years. For example, ARC-CO payments ranged from slightly more than \$0 to \$63 per base acre for the 11 crops that received no PLC payment (see Figure 5). No relationship is not unexpected. ARC and PLC address different risks: ARC is designed to address declines in revenue relative to the level of revenue generated by the market over the 5 preceding crop years. PLC is designed to address low price, where low is defined by a

reference price set by Congress. The correlation is +0.36 for the 21 commodities, which implies that per base acre payment by one of the programs explains only 13% of the variation in per acre payment by the other program.



Summary Observations

- Payments by ARC-CO and PLC totaled \$13.1 billion for the 2014 plus 2015 crop years.
- Corn base acres received the most payments, \$7.7 billion. However, from a base acre perspective, payments were highest for peanuts and long-grain rice, both exceeding \$200 per base acre for 2014 plus 2015.
- Cotton is not eligible for ARC and PLC payments, but the generic base acre program has made ARC-CO and PLC payments to former cotton base acres totaling \$593 million, or \$34 per base acre. Former cotton base ranked 5th in total and 6th in per base acre payment.
- Payment per base acre varies much less across covered commodities for ARC-CO than PLC. Reasons include (1) PLC has a tendency to make high or no payments (2) ARC-CO has a smaller cap on payment per acre, and (3). ARC-CO but not PLC is a revenue program and thus can make payments for yield declines.
- Because farms had to choose between ARC-CO and PLC, they are often thought of as competing programs.
- While the relationship across program crops between payments by ARC-CO and PLC for the 2014 and 2015 crop years is positive, it is relatively low.
- A low relationship is not unexpected since ARC and PLC address different risks: ARC is designed to address declines in revenue relative to the level of revenue generated by the market over the 5 preceding crop years. PLC is designed to address low price, where low is defined as below the reference price set by Congress. These two risks can overlap but do not necessarily have to overlap, as ARC-CO and PLC payments for 2014 and 2015 illustrate.
- Given that ARC and PLC address different risks, a question for the next farm bill is whether a more diversified or comprehensive risk-based program can be designed that better incorporates both aspects of farm risk—such as, for example, by dividing base acres between ARC and PLC. As a specific illustration, base acres could be divided so that 50% is in ARC and 50% in PLC.
- The essential feature of any risk is uncertainty about if and when it will occur. Providing a combined program means farms would receive assistance for the risk of multiple year declines in revenue via the ARC portion of the combined program and for the risk of multiple years of low prices relative to the reference price via the PLC portion of the combined program. Farms would not face the consequences of choosing the wrong risk and politicians would not face the consequences of supporting a program that provides no assistance when their voters need it.

Data Source:

U.S. Department of Agriculture, Farm Service Agency. "ARC/PLC Program" and "ARC/PLC Program Data," February 2017. https://www.fsa.usda.gov/programs-and-services/arcplc_program/arcplc-program-data/index and https://www.fsa.usda.gov/programs-and-services/arcplc_program/index