



## **Indiana Farm Bureau®**

### **When Would ARC Pay More than PLC for 2024 Corn and Soybeans**

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#### **Summary:**

- The effective PLC reference price for 2024 corn and soybeans is \$4.01 and \$9.26, respectively, increased because of higher commodity prices. Similarly, the Olympic Average Price used in the ARC revenue guarantee increased to \$4.85 and \$11.12 for 2024 corn and soybeans.
- A combination of lower prices and yields would trigger ARC payments that exceed any PLC payments. However, farmers should expect payments close to zero or zero without significantly lower prices and yields.
- The enrollment deadline for ARC or PLC is March 15, 2024, at your FSA office.

Farmers must decide whether to enroll in Agriculture Risk Coverage (ARC) or Price Loss Coverage (PLC) for each Farm Service Agency (FSA) farm before the March 15 deadline. This decision has been uninteresting the last two years as the projected U.S. marketing year average (MYA) prices for corn and soybeans were well above the prices that would trigger a payment for either program.

The 2018 farm bill provided the potential for the PLC reference price to increase above the statutory reference price levels of \$3.70 for corn and \$8.40 for soybeans by as much as 15% during a multi-year period of higher commodity prices. With corn MYA prices of \$4.53, \$6.00 and \$6.54 per bushel for 2020, 2021 and 2022, the effective PLC reference price has increased from \$3.70 to \$4.01 per bushel (Table 1). Similarly, the soybean MYA prices of \$10.80, \$13.30 and \$14.20 per bushel have raised the effective reference price to \$11.12 per bushel for 2024 (Table 1). The higher MYA prices also increase the Olympic Average Price (OAP) used in calculating the ARC benchmark revenue. The OAP for 2024 corn and soybeans are \$4.85 and \$11.12 per bushel, respectively (Table 1).

The decision on which program has the greater potential to trigger payments depends on your expectation of the U.S. MYA price. USDA has not provided any supply and demand estimates for the 2024 crops, with the first glimpse into price potential released as part of USDA's February *Agricultural Outlook Conference*. The only price projection provided by USDA was their *Preliminary Baseline Projections* released last November as part of the federal budgeting process.

Table 1 includes last November’s U.S. MYA price projections of \$4.50 for corn and \$11.30 for soybeans. Recall that PLC payments are triggered when the MYA price is less than \$4.01 and \$9.26 for corn and soybeans. Similarly, ARC payments are triggered, assuming no change in OA yield, when the MYA price is less than \$4.17 and \$9.56 for corn and soybeans. Table 1 suggests that ARC and PLC payments are more likely to be triggered in 2024 than in the last two years; however, the likelihood of a payment is still tiny.

Table 1. PLC Effective Reference Price, ARC Olympic Average Price, and Projected Marketing Year Average Price for 2024 Corn and Soybeans.

	2024 PLC Effective Reference Price	2024 ARC Olympic Average Price	2024 Projected Marketing Year Average Price <sup>1/</sup>
Corn	\$4.01	\$4.85	\$4.50
Soybeans	\$9.26	\$11.12	\$11.30

<sup>1/</sup> Projected Marketing Year Average Price from USDA’s Preliminary Baselines Projections, November 2023.

### 2024 ARC vs. PLC Corn Example

Table 2 shows potential ARC payments minus any PLC payment for varying U.S. MYA corn prices and county corn yields. The negative numbers, displayed in red, are price and yield combinations where PLC payments are larger than the ARC payments. The green shaded area highlights the price and yield combinations where either payment is triggered.

Table 2 highlights the 190-bushel county yield and the \$4.85 MYA price with dashed lines representing the OA yield and OA Price, respectively, that determine the ARC revenue guarantee. Rows above the dashed line represent larger OA yields, and rows below represent smaller yields.

Table 2. Example Difference in Corn ARC-CO and PLC Payments (\$/Base Acre) for 2024.

County Yield	2024 U.S. Marketing Year Average Price											
	\$3.75	\$3.85	\$3.95	\$4.05	\$4.15	\$4.25	\$4.35	\$4.45	\$4.55	\$4.65	\$4.75	\$4.85
200	-\$1	-\$4	-\$6	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
195	+\$52	+\$35	+\$19	+\$2	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
190	+\$68	+\$52	+\$36	+\$20	+\$4	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
185	+\$78	+\$68	+\$52	+\$37	+\$21	+\$5	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
180	+\$78	+\$78	+\$69	+\$54	+\$39	+\$23	+\$8	+\$0	+\$0	+\$0	+\$0	+\$0
175	+\$78	+\$78	+\$78	+\$71	+\$56	+\$41	+\$27	+\$12	+\$0	+\$0	+\$0	+\$0
170	+\$78	+\$78	+\$78	+\$78	+\$74	+\$59	+\$45	+\$31	+\$16	+\$2	+\$0	+\$0
165	+\$78	+\$78	+\$78	+\$78	+\$78	+\$78	+\$64	+\$50	+\$35	+\$21	+\$7	+\$0
<b>PLC Assumptions</b>												
Payment Rate	\$0.26	\$0.16	\$0.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Payment Yield	168.0	168.0	168.0	168.0	168.0	168.0	168.0	168.0	168.0	168.0	168.0	168.0
Payment (\$/acre)	\$37	\$23	\$9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

<sup>1/</sup> The ARC-CO revenue guarantee is assumed to be \$792.49 based on an Olympic Average price of \$4.85 and an Olympic Average corn yield of 190 bushels/acre (represented by dash box in Table 2).

<sup>2/</sup> The prices and yields illustrate potential payments and do not imply that these yields or prices are forecasts.

The lower part of Table 2 shows the PLC payments for the different potential MYA prices for a payment yield of 168 bushels per acre. Remember that PLC payments are triggered only at MYA prices below \$ 4.01 per bushel, so PLC payments would exceed ARC when MYA prices are less than \$4.01 and county yields are 200-bushel or larger (Table 2). ARC payments exceed PLC for lower prices and lower yields. However, Table 2 also indicates that no payments for either program are likely for 2024 as you compare the green-shaded area with payments to the white-shaded area of no payments. Notice that prices and yields need to decrease below the OA levels to trigger payments, so no corn payment is a very likely outcome in 2024 (Table 2).

### 2024 ARC vs. PLC Soybean Example

Table 3 reports the difference between ARC and PLC payments for varying soybean MYA prices and county yields. The formatting is the same as in Table 2, as the dashed lines highlight the OA yield at 58 and OA price of \$11.12. Similarly, the green-shaded area highlights the yield and price combination where a PLC or ARC payment is triggered (Table 3).

Like the example for corn in Table 2, potential PLC payments would exceed ARC payments when prices decline below \$9.26 per bushel and yields increase above the OA yield of 58 bushels (Table 3). The other price yield combinations show that ARC payments exceed PLC payments. ARC payments are triggered without a yield loss when the MYA price is less than \$9.56 per bushel. With current projections of a MYA price of \$11.30, prices would have to decline by 15% to start triggering an ARC payment without also having lower county yields. Also, notice that no payment is likely for soybeans in 2024 when you compare the green-shaded area to the white-shaded area.

Table 3. Example Difference in Soybean ARC-CO and PLC Payments (\$/Base Acre) for 2024.

2024 U.S. Marketing Year Average Price												
County Yield	\$8.15	\$8.42	\$8.69	\$8.96	\$9.23	\$9.50	\$9.77	\$10.04	\$10.31	\$10.58	\$10.85	\$11.12
63	-\$15	-\$17	-\$20	-\$14	-\$1	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
58	+\$5	+\$17	+\$17	+\$16	+\$15	+\$3	+\$0	+\$0	+\$0	+\$0	+\$0	+\$0
53	+\$5	+\$17	+\$29	+\$41	+\$53	+\$43	+\$31	+\$19	+\$7	+\$0	+\$0	+\$0
48	+\$5	+\$17	+\$29	+\$41	+\$53	+\$55	+\$55	+\$55	+\$51	+\$40	+\$29	+\$18
43	+\$5	+\$17	+\$29	+\$41	+\$53	+\$55	+\$55	+\$55	+\$55	+\$55	+\$55	+\$55
38	+\$5	+\$17	+\$29	+\$41	+\$53	+\$55	+\$55	+\$55	+\$55	+\$55	+\$55	+\$55
PLC Assumptions												
Payment Rate	\$1.11	\$0.84	\$0.57	\$0.30	\$0.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Payment Yield	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
Payment (\$/acre)	\$50	\$38	\$26	\$14	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0

1/ The ARC-CO revenue guarantee is assumed to be \$644.96 based on an Olympic Average price of \$11.12 and an Olympic Average soybean yield of 58 bushels/acre (represented by dash box in Table 3).

2/ The prices and yields illustrate potential payments and do not imply that these yields or prices are forecasts.

## Takeaway Message for Farmers

Farmers preparing to make their decision to enroll in ARC or PLC for 2024 should consider the following.

1. If only worried about lower prices, then PLC would be preferred because it only provides price protection.
2. The ARC revenue program has greater potential to trigger a payment from a combination of lower prices and yields.
3. ARC payments tend to be larger than PLC payments when county yields are smaller than the OA yield.
4. While large payments are theoretically possible, farmers should expect payments to be close to zero or zero without experiencing significantly lower prices and yields.
5. Farmers should continue developing their revenue risk management plan incorporating ARC or PLC, crop insurance and market price risk management tools.
6. A decision spreadsheet developed by Extension economists at the University of Illinois is available at <https://farmdoc.illinois.edu/policy-toolbox>. Download the *2024 Farm Bill What If Tool*. The spreadsheet generates tables like Table 2 and Table 3 for your county, with your county's OA and PLC payment yields included as default variables. The table calculates the PLC payment less than the ARC payment, so a negative number indicates that the ARC payment is larger than the PLC payment.

Farmers have until March 15 to enroll and make any election changes in ARC and PLC for their 2024 corn and soybean crops.