



## Weekly Farm Economics: Comparing 2024 Effective Reference and ARC Benchmark Prices

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In 2024, the effective reference price which determines payments for the Price Loss Coverage (PLC) program will be above the statutory reference price for many crops. At the same time, effective reference prices will be below Agriculture Risk Coverage (ARC) benchmark prices. Herein we make comparisons of effective reference prices to ARC benchmark prices, thereby providing indications of the probability of payments from PLC and ARC as we continue our analysis of the ARC/PLC decision for the 2024 program year (see *farmdoc daily* from [January 16, 2024](#) and the Excel-based [What-If Tool](#) to aid in the ARC/PLC decision for 2024).

Assuming the 2024 yield for a county equals its ARC trend-adjusted benchmark yield, a measure of relative price protection provided by the two programs becomes the ratio of a commodity’s effective reference price to its ARC trigger price (86% of the ARC benchmark price). For crops whose ARC trigger prices exceeds the effective reference price, ARC payments can be triggered at higher market price levels and vice versa.

While today’s article focuses on price protection in comparing PLC to ARC for 2024, other factors should also be considered.

### Price Protection of PLC vs ARC

The upper panel of Table 1 provides 2024 PLC and ARC program price information for major crops, defined as having more than 1 million base acres in 2023. The lower panel includes other program crops, those with less than 1 million total base acres in 2023.

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**Table 1. PLC Reference Prices and ARC-CO Benchmark Price for 2024**

Commodity	Units	Statutory Reference Price	Effective Reference Price (ERP)	ARC Benchmark Price	ARC Trigger Price <sup>1</sup>	ARC Trigger to ERP Ratio <sup>2</sup>
Grain Sorghum	\$/bu	\$3.95	\$4.06	\$5.01	\$4.31	106.1%
Oats	\$/bu	\$2.40	\$2.76	\$3.38	\$2.91	105.3%
Corn	\$/bu	\$3.70	\$4.01	\$4.85	\$4.17	104.0%
Soybeans	\$/bu	\$8.40	\$9.26	\$11.12	\$9.56	103.3%
Canola	\$/lb	\$0.2015	\$0.2015	\$0.23	\$0.20	99.7%
Sunflower Seed	\$/lb	\$0.2015	\$0.2015	\$0.23	\$0.20	98.5%
Wheat	\$/bu	\$5.50	\$5.50	\$6.21	\$5.34	97.1%
Seed Cotton	\$/lb	\$0.3670	\$0.3670	\$0.40	\$0.34	92.7%
Barley	\$/bu	\$4.95	\$4.95	\$5.07	\$4.36	88.1%
Rice (Long Grain)	\$/lb	\$0.1400	\$0.1400	\$0.14	\$0.12	86.0%
Peanuts	\$/lb	\$0.268	\$0.268	\$0.27	\$0.23	86.0%
Sesame Seed	\$/lb	\$0.2015	\$0.2317	\$0.38	\$0.32	139.8%
Mustard Seed	\$/lb	\$0.2015	\$0.2317	\$0.29	\$0.25	106.9%
Lentils	\$/lb	\$0.1997	\$0.1997	\$0.25	\$0.21	106.7%
Chickpeas (Large)	\$/lb	\$0.2154	\$0.2261	\$0.27	\$0.23	103.3%
Chickpeas (Small)	\$/lb	\$0.1904	\$0.2108	\$0.25	\$0.22	102.4%
Flaxseed	\$/bu	\$11.28	\$11.28	\$13.36	\$11.49	101.8%
Crambe	\$/lb	\$0.2015	\$0.2060	\$0.24	\$0.21	101.2%
Dry Peas	\$/lb	\$0.1100	\$0.1100	\$0.13	\$0.11	99.1%
Safflower	\$/lb	\$0.2015	\$0.2015	\$0.22	\$0.19	95.7%
Rapeseed	\$/lb	\$0.2015	\$0.2015	\$0.21	\$0.18	88.1%
Rice (Med/Short Grain)	\$/lb	\$0.1400	\$0.1400	\$0.14	\$0.12	86.0%
Rice (Temperate Japonica) <sup>3</sup>	\$/lb	\$0.1730	\$0.1990	-	-	-

<sup>1</sup>86% of the ARC Benchmark Price

<sup>2</sup>ARC Trigger Price divided by the Effective Reference Price

<sup>3</sup>No ARC Benchmark Price reported for 2024 as of January 23, 2024

Source: ARC/PLC Program Data, Farm Service Agency, United States Department of Agriculture

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Columns 3 and 4 focus on prices associated with the PLC program – the statutory reference price (minimum reference price stated in the farm bill) and the 2024 effective reference price (price determined by a farm bill formula that can vary across time). Four of the eleven major program crops have effective reference prices above the statutory minimum for 2024 – corn, soybeans, grain sorghum, and oats. Six of the twelve other program crops have effective reference prices above the statutory minimum for 2024 – temperate japonica rice, large and small chickpeas, mustard seed, sesame seed, and crambe. For these crops, the reference price escalator clause initiated by the 2018 Farm Bill is in effect (see *farmdoc daily* from [June 29, 2022](#)). The specific formula is 85% of the Olympic average of the actual marketing year average prices over the 5-year period from 2018 to 2022.

A higher effective reference price increases the likelihood of PLC program payments being triggered. However, higher effective reference prices, and the historical prices which led to those higher reference prices, also leads to greater price protection for the ARC program. The ARC benchmark price – the price component of the revenue guarantee for the ARC program – is based on the Olympic average of actual marketing year average prices over the same 5-year period (2018 to 2022 for the 2024 program year). In

addition, any historical prices that are below the effective reference price for the current year are replaced by the effective reference price in computing the Olympic average.

Column 5 of Table 1 reports the ARC Benchmark prices for each commodity for the 2024 program year. Column 6 reports the “ARC Trigger Price” which is defined as 86% of the benchmark price. The ARC program triggers payments when actual revenue is below 86% of the revenue guarantee (benchmark price x benchmark yield). The trigger price is the price at which ARC payments would begin to be triggered if actual yields are at benchmark levels.

The last column of Table 1 provides the ratio of the ARC trigger price to the effective reference price for each crop. For major program crops, the same four whose 2024 effective reference price is above the statutory minimum have ARC trigger prices which exceed the effective reference price. Other crops whose ARC trigger price exceeds the PLC effective reference price include lentils, flaxseed, large and small chickpeas, mustard seed, sesame seed, and crambe.

Assuming trend benchmark yield levels occur in 2024, the crops with a trigger price to effective reference price ratio exceeding 100% would have ARC payments triggered at a higher price level than PLC payments (these are indicated in green in Table 1). This suggests ARC is more likely to trigger payments on the basis of low prices than is PLC. The larger this ratio the greater the relative price protection of ARC compared with PLC.

Similarly, PLC is more likely to trigger payments based on low prices than ARC if the ratio is below 100%. The smaller the ratio the greater the relative price protection of PLC compared with ARC.

## Discussion

Higher prices over the 2018 to 2022 marketing years have led to higher PLC effective reference prices and ARC benchmark prices for the 2024 program year for a number of crops. These changes reflect the current designs of the PLC and ARC programs which allows them to adjust to changing market conditions over time.

Comparing a commodity’s effective reference price to its ARC trigger price is one way to evaluate relative price protection offered by both programs. If the effective reference price exceeds the ARC trigger price, PLC payments will be triggered at higher prices than ARC assuming trend yield levels for 2024. An ARC trigger price above the effective reference price implies a greater likelihood of ARC payments due to low prices (assuming trend benchmark yield levels).

Of course, an isolated look at relative price protection is not the only dimension along which to compare and evaluate the ARC and PLC programs. While trend benchmark yields may be the best guess for 2024, actual yields will vary from expectations. ARC has the potential to trigger payments at even higher prices if yield losses occur.

The cap on ARC payments (maximum of 10% of benchmark revenue) is another consideration. While ARC may start to trigger payments at higher price levels, sufficiently low prices would tend to favor the PLC program in terms of price protection once the ARC payment cap is hit.

While the county level version of ARC (ARC-CO) tends to get the most attention, and ARC-CO or PLC will likely be the choice for most situations, producers are also encouraged to consider the individual ARC (ARC-IC) program in their decision-making. See the *farmdoc daily* article from [October 29, 2019](#) for help in considering if ARC-IC is an appropriate choice for your situation.

Finally, a producer’s plan for crop insurance coverage also needs to be considered. Use of the Supplemental Coverage Option (SCO) will be limited to acres enrolled in PLC, which could outweigh an expectation for greater support from ARC in making the program election decision.

Future articles will continue to compare the ARC and PLC program options to help inform the decision for 2024.

## References

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