Weekly Farm Economics: 2023 and 2024 Effective Reference Prices and the Next Farm Bill

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The reference price escalator was introduced in the 2018 Farm Bill and uses effective reference prices to calculate Price Loss Coverage (PLC) payments. Effective reference prices can exceed statutory reference prices. Through 2023, the escalator clause has not resulted in higher reference prices for corn and soybeans. However, in 2024, the escalator likely will increase reference prices. As modifications to the next farm bill gain attention, we suggest considering modifications to enhance the price escalator.

Overview – Reference Price Escalator

The reference price escalator was introduced in the 2018 Farm Bill. Rather than using the statutory reference price, an effective reference price is used to calculate Price Loss Coverage (PLC) payments. If 85% of the Olympic average of the five previous yields exceeds the statutory reference price, the effective price will exceed the statutory reference price, potentially leading to higher PLC payments. The effective reference price also replaces the statutory reference price in Agriculture Risk Coverage (ARC) benchmark price calculations, potentially leading to higher benchmark prices and ARC payments (see *farmdoc daily*, June 29, 2022).

The effective reference price for a crop year is the higher of (a) the statutory reference price stated in the 2018 Farm Bill or (b) 85% of the Olympic average price (excludes high and low prices) for the five most recent completed crop years but capped at 115% of the statutory reference price (US Congress, 2018). Since the reference price escalator uses prices for completed marketing years, the calculation window for the upcoming 2023 crop year is the 2017-2021 marketing years. More broadly, the calculation window is the five marketing years that are 2 to 6 years before the marketing year for which the escalator is being calculated. Using completed years in benchmark calculation was introduced after implementing the 2018 Farm Bill by the Farm Service Agency. Given the 85% factor in the escalator calculation, the average

market price during the calculation window must exceed the statutory reference price by more than 15% for the escalator to increase the reference price.

2023 Effective Reference Prices

Table 1 shows the calculation of 2023 effective reference prices for corn, soybeans, wheat, seed cotton, and peanuts. Take soybeans as an example of calculations. Soybeans' statutory price is $8.40. The maximum effective reference price is 115% of the statutory reference price, or $9.66 per bushel. Table 1 shows the 2017 through 2021 market year average (MYA) prices. The Olympic average is $9.57 (($9.33 (2017 MYA price) + $8.57 (2019 MYA price) + $10.80 (2020 MYA price))/3). Eighty-five percent of $9.57 is $8.13. Since $8.13 is below the $8.40 statutory reference price, the 2023 effective reference price equals the $8.40 statutory reference price.

Table 1. Calculation of 2023 Effective Reference Prices

	Corn	Soybeans	Wheat	Seed Cotton	Peanuts
	in dollars per bushel			in dollars per pound	
Statutory Reference Price	$3.70*	$8.40*	$5.50*	$0.3670*	$0.2675*
115% of Reference Price	$4.26	$9.66	$6.33	$0.4221	$0.3076
Market Year Average (MYA) Prices					
2017	$3.36	$9.33	$4.72	$0.3357	$0.2290
2018	$3.61	$8.48	$5.16	$0.3453	$0.2150
2019	$3.56	$8.57	$4.58	$0.3058	$0.2050
2020	$4.53	$10.80	$5.05	$0.3393	$0.2100
2021	$6.00	$13.30	$7.63	$0.4675	$0.2430
85% of 5-year Olympic Average	$3.32	$8.13	$4.23	$0.2891	$0.1853
2023 Effective Reference Price*	$3.70	$8.40	$5.50	$0.3670	$0.2675

*Higher of Reference Price or 85% of 5-year Olympic Average, with a maximum of 115% of Reference Price.
Shaded cells are the high and low values dropped when calculating Olympic Average

ILLINOIS   Source: USDA Farm Service Agency   farmdocDAILY

For all crops shown in Table 1, the 2023 effective reference prices are its statutory reference prices.

2024 Effective Reference Prices

There are excellent chances that the 2024 effective reference prices will exceed the statutory reference prices for corn and soybeans. Table 2 shows projections of 2024 effective reference prices. The 2022 corn and soybean marketing years are still ongoing. As a result, 2022 projected MYA prices are based on information contained in the January edition of the World Agriculture Supply and Demand Estimates (WASDE) report. The 2024 projected effective reference price is $4.01 per bushel for corn, above the $3.70 statutory reference price. The $9.26 projected effective reference price for soybeans exceeds the $8.40 statutory reference price. Higher prices since 2020 have led to the higher projected effective reference prices. Effective reference prices will exceed statutory prices if the 2022 MYA price is above $4.93 for corn and $10.29 for soybeans.

Table 2. Calculation of 2024 Effective Reference Prices

	Corn	Soybeans	Wheat	Seed Cotton	Peanuts
	in dollars per bushel			in dollars per pound	
Statutory Reference Price	$3.70	$8.40	$5.50*	$0.3670*	$0.2675*
115% of Reference Price	$4.26	$9.66	$6.33	$0.4221	$0.3076
Market Year Average (MYA) Prices					
2018	$3.61	$8.48	$5.16	$0.3453	$0.2150
2019	$3.56	$8.57	$4.58	$0.3058	$0.2050
2020	$4.53	$10.80	$5.05	$0.3393	$0.2100
2021	$6.00	$13.30	$7.63	$0.4675	$0.2430
Project MYA Price for 2022	$6.70	$14.20	$9.10	$0.4172	$0.2430
85% of 5-year Olympic Average	$4.01*	$9.26*	$5.05	$0.3122	$0.1893
2023 Effective Reference Price*	$4.01	$9.26	$5.50	$0.3670	$0.2675

*Higher of Reference Price or 85% of 5-year Olympic Average, with a maximum of 115% of Reference Price.
Shaded cells are the high and low values dropped when calculating Olympic Average

ILLINOIS   Source: USDA Farm Service Agency   farmdoc DAILY

The Next Farm Bill

One modification being discussed for the next farm bill is raising statutory reference prices for all crops. Recent increases in production costs may contribute to suggestions for higher reference prices.

Instead of focusing on reference prices, we suggest changing the parameters on the effective reference price calculation. For example, the 85% factor on the moving average could be increased to 90 or 95%. The upper limit on the effective reference price could be raised from 115% of the statutory reference price to 125% or 135%.

Relative to changing statutory reference prices, increasing effective reference price parameters have several advantages:

- Over time, the effective reference price will adjust to market conditions. Setting a specific statutory reference price is difficult at any time. This is particularly true now, given the uncertainty over prices in the future and potential structural changes that may have occurred to prices. Errors have happened in the past. In the 1981 Farm bill, support prices were raised under the assumption that high commodity prices and high inflation would continue. The effective reference price mechanism can avoid these errors (see *farmdoc daily*, July 6, 2022).

- Economic theory indicates that prices in competitive markets will equal costs, on average, over time. Agricultural markets are competitive. Using the effective price mechanism then relies on markets to set price support levels which should reflect costs.

- Using a formula of past prices allows effective prices to adjust to market conditions. However, as their name implies, statutory reference prices are set in statute and cannot adjust to market conditions.

Summary

Effective reference prices likely will be above statutory reference prices for corn and soybeans if the 2018 Farm Bill continues into 2024. Rather than focus on statutory reference prices, increasing parameters on the effective price mechanism has advantages.

References

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