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Weekly Farm Economics: 2024 Low Returns, Prices, and the Federal Safety Net

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September 10, 2024

***farmdoc daily* (14): 164**

Recommended citation format: Schnitkey., G., N. Paulson, and C. Zulauf. "2024 Low Returns, Prices, and the Federal Safety Net." *farmdoc daily* (14): 164, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 10, 2024.

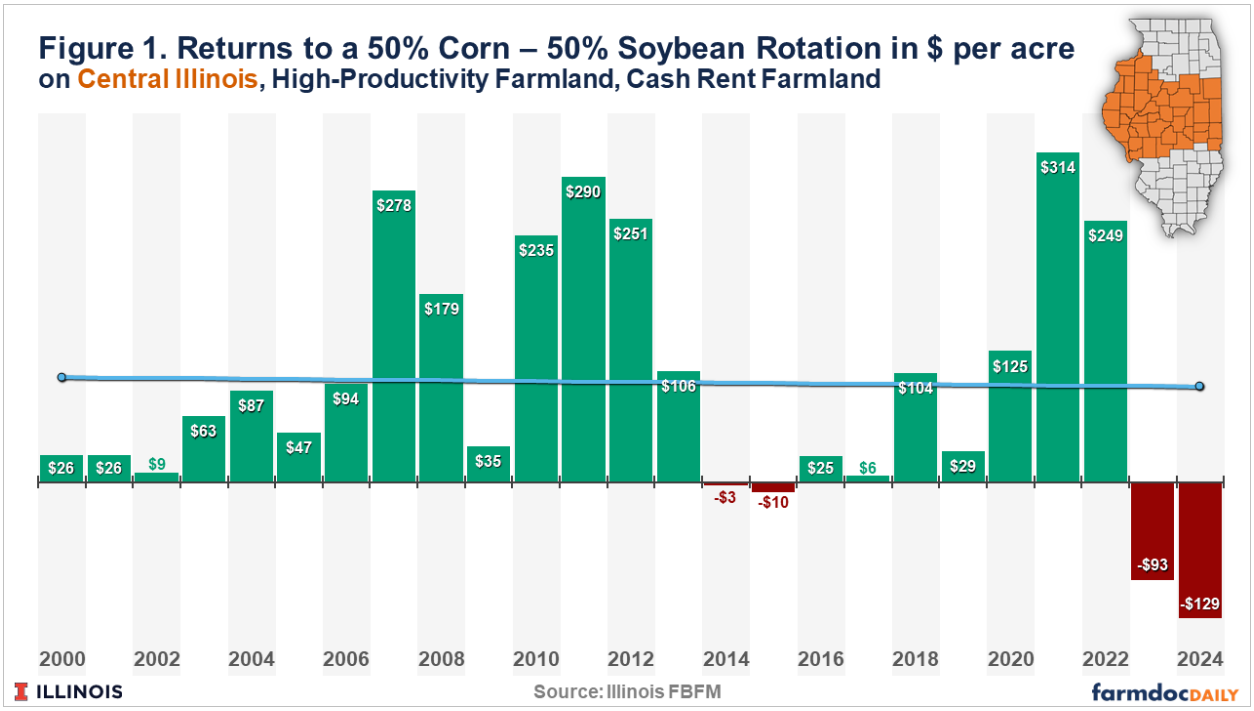
Permalink: https://farmdocdaily.illinois.edu/2024/09/2024-low-returns-prices-and-the-federal-safety-net.html

Returns on corn and soybean production from cash rent farmland in Illinois were negative in 2023 and are projected to remain negative in 2024. Meanwhile, payments from the two standing farm safety net programs — crop insurance and the commodity title program — are forecasted to provide relatively low levels of support for 2023 and 2024. This raises questions about the Federal Safety Net programs, specifically the commodity title programs. In this article, we outline these facts and offer commentary, proposing that the commodity title programs should be more price-responsive. An ad hoc disaster assistance program like the Economic Relief Program (ERP) will provide little aid to Midwest farmers, as low returns from revenue declines within a year do not offset the significant losses in prices sustained over the years.

Low Farmland Returns

As discussed in a previous *farmdoc daily* article (July 30, 2024), farm returns are projected to be low for 2024. For 2024, we projected returns at -$129 per acre for a corn-soybean rotation on high-productivity farmland in central Illinois that is cash rented (see Figure 1). The -$129 return is below the -$93 return for 2023. The 2023 and 2024 returns are considerably below the most recent years of negative returns in 2014 (-$3 per acre) and 2015 (-$10 per acre). Two factors have contributed to the low returns. First, price declines have played a significant role in the low returns. Further contributing to those low returns are stubbornly high costs.

Those significant negative returns in 2023 and 2024 will lead to the erosion of the strong financial position on many farms achieved due to higher incomes from 2020 to 2022. Ironically, the two standing farm safety net programs—crop insurance and commodity title programs—are expected to provide relatively low levels of support, if any, for 2023 and 2024.



Crop Insurance

Most farmers in Illinois purchase crop insurance that provides revenue coverage (*farmdoc daily*, January 25, 2022, August 27, 2024). These plans make payments when revenue is below a revenue guarantee. Minimum revenue guarantees are set using projected prices in spring before the planting of crops. For corn and soybeans in Illinois, projected prices are based on settlement prices of harvest-time futures contracts during February (December contract for corn; November contract for soybeans). Because those guarantees are reset yearly, the crop insurance program does not provide across-year price protection. A considerable portion of the recent price declines have occurred across years.

Recent changes in projected and harvest prices will illustrate the nature of intra-year price protection offered by crop insurance. The projected price for corn in Midwest states was $5.91 per bushel in 2023, an all-time high projected price (see Table 1). The harvest price for 2023 was $4.88 per bushel, 17% below the projected price. The highest level of farm-level coverage products is 85%, meaning there is a 15% deductible. At an 85% level, a 17% price decline would trigger small insurance payments if yields were not above their guarantee level. Many farmers had above-trend yields in 2023, resulting in small insurance payments. In 2023, indemnity payments on corn in Illinois resulted in a loss ratio of 0.45, well below the U.S. average of 0.96.

The projected price for corn in 2024 is $4.66, a 21% decline from the $5.91 level in 2023 (see *farmdoc daily,* August 6, 2024 for more detail). The significantly lower projected price resulted in revenue guarantees, at any given coverage level, being much lower in 2024 than in 2023. Current futures market prices put the harvest price at $4.00, a 14% decline from the projected price. A $4.00 harvest price suggests even fewer and/or smaller insurance indemnities for corn in 2024 than in 2023, particularly given that most expect record yield levels in Illinois and across most of the major corn-growing regions of the US.

The soybean experience with crop insurance is similar to that of corn. The 2023 projected price was $13.76 per bushel, the second-highest projected soybean price in history. The 2023 harvest price was $12.84 per bushel, 7% lower than the projected prices. Overall, yield losses had to occur before revenue insurance would trigger payments in 2023. The loss ratio for soybeans in 2023 was 0.38 in Illinois. The 2024 projected price was $11.55, 16% below the 2023 price. Current futures prices put the harvest price at $10.20, a 12% decline. Again, in 2024, yield losses will be needed to trigger insurance payments, an unlikely event given good 2024 growing conditions across Illinois and most major soybean growing areas.

Table 1. Projected and Harvest Prices, Corn and Soybeans in Midwest, 2019 - 2024

Year	Corn			Soybeans		
	Projected Price	Harvest Price	Change*	Projected Price	Harvest Price	Change*
2019	4.00	3.90	-3%	9.54	9.25	-3%
2020	3.88	3.99	3%	9.17	10.55	15%
2021	4.58	5.37	17%	11.87	12.3	4%
2022	5.90	6.86	16%	14.33	13.81	-4%
2023	5.91	4.88	-17%	13.76	12.84	-7%
2024	4.66	4.00	-14%	11.55	10.2	-12%

Source: Risk Management Agency
* Harvest price / projected price - 1

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Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC)

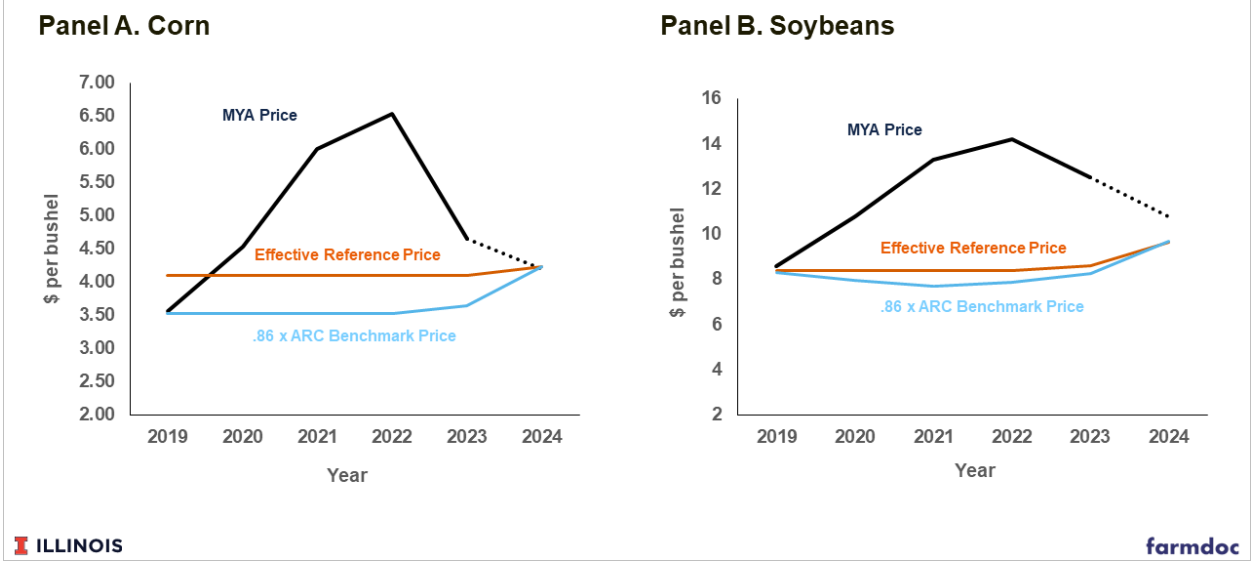
Unlike crop insurance programs, commodity title programs are specifically designed to protect against low prices that persist across time or low revenue that could span years. Price Loss Coverage (PLC) makes payments when the market year average (MYA) price is below an effective reference price. Agriculture Risk Coverage at the county level (ARC-CO) makes payments when county revenue is below 86% of a benchmark revenue (national benchmark price times county benchmark yield).

Commodity title payments for the 2023 production year, if triggered, will not be made until October 2024. Given current estimates, 2023 payments are unlikely (see *farmdoc daily*, August 13, 2024). The 2023 effective reference prices are $3.70 for corn and 8.40 for soybeans. USDA is forecasting the 2023 MYA prices at $4.65 for corn and $12.50 for soybeans, well above effective reference prices, suggesting that PLC will not make payments.

A useful comparison to evaluate whether ARC-CO will make a payment is to compare the MYA price to 86% of the benchmark price. If the MYA price is above 86% times the benchmark price, county yields must be below the benchmark yield before ARC makes payments (see Figure 2). For corn, the 2023 benchmark price is $3.98, and 86% of $3.98 is $3.42. Given the $4.65 projected MYA, corn yield in a county would need to be well below benchmark yields before ARC makes payments. For soybeans, 86% of the 2023 benchmark price ($9.57) is $8.23, well below the 2023 MYA price projected of $12.50. Like corn, a county's soybean yield would need to be considerably below benchmark yield before ARC payments would occur. Overall, both corn and soybean yields were above trend in 2023, suggesting low levels of ARC support with few counties triggering payments.

For 2024, payments continue to be unlikely for PLC, even as prices have continue to decline. Current projections of 2024 MYA prices made by WASDE are $4.20 for corn and $10.80 for soybeans, above the 2024 effective reference prices of $4.01 for corn and $9.26 for soybeans.

Figure 2. Market Year Average (MYA), Reference, and Agriculture Risk Coverage (ARC) Prices



ARC at the county level has a higher likelihood of payments for corn but still seems unlikely for most Illinois counties. For 2024, 86% of 2024 benchmark prices are $4.17 for corn and $9.56 for soybeans. A 2024 MYA price of $4.20 is near $4.17, meaning even small county yield shortfalls could trigger ARC payments. However, prospects are for record-setting yields in Illinois, leading to prospects of most counties not receiving ARC-CO payments. Those shortfalls could occur outside of Illinois, perhaps in the drought-stricken areas of southern Ohio.

Commentary

The negative returns for 2023 and 2024 suggest that payments from the Federal Safety Net would provide useful relief. Yet, few payments are projected, implying that there may be issues with the Federal programs given the multi-year long decline in prices. Crop insurance protects against losses for within-year yield or revenue declines. Hence, most of the focus must be on the commodity title programs whose design is to, at least partially, protect against price declines relative to experience over multiple recent years.

Commodity title reform has received attention in the recent farm bill discussion. The House Agriculture Committee passed a Farm Bill proposal to increase statutory reference prices and improve ARC parameters (*farmdoc daily*, May 21, 2024). The ARC coverage level would be increased from 86% to 90%, and the payment range on ARC would be increased from 10% to 12.5%. Of those proposed changes, the statutory reference price increases would have no impact on PLC payments in a year like 2023 and marginal impacts on payments in a year like 2024. The ARC changes would increase the likelihood and size of ARC payments, particularly for corn, under conditions similar to those in 2023 and currently being experienced in 2024.

Overall, budget constraints likely preclude increasing statutory reference prices to the levels proposed in the House Ag Committee's Farm Bill. A more likely way of improving PLC and ARC is to change the ARC benchmark and effective reference price parameters. Changes to either would generally have a more limited duration of years of payments compared to increasing statutory reference prices. Hence, budgetary exposure is more limited than with statutory reference price changes. Some possible changes are:

1. Increase the moving average term on the effective reference price mechanism above the current 85% level.

2. Increase the range of the effective reference price from the current level of 115% of the statutory reference price.

3. Increase the ARC guarantee above 86%.

4. Increase the ARC payment range above its current 10% of benchmark revenue.

Changes could also be made to the number of years used to set effective prices.

Some discussion has been given to passing an ad hoc disaster assistance program, similar to the Economic Recovery Program (ERP) program of previous years (see *farmdoc daily*, June 6, 2022, June 14, 2022). For Midwest farms, the ERP has very limited value. ERP increases crop insurance guarantees. As discussed above, the problem with low revenue is not predominately a within-year revenue issue but one that occurs because prices have declined over multiple years. The ERP design does not address this issue.

Summary

A steep decline in prices across years has resulted in low to negative average returns to Midwest farms in 2023 and projected for 2024. Crop insurance programs are not designed to cover the risk of multi-year price declines and current commodity title programs are also expected to provide little relief for these low prices. Modifying commodity title programs to make them more market-responsive would aid in providing relief to farmers. In contrast, a continuation of the ERP ad hoc program would provide only modest relief, if any, to most Midwest farmers as it does not address the major issues currently causing low farm returns and increasing financial stress.

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