



Indiana Farm Bureau®

2023 Indiana Corn and Soy Returns, Prospects for 2024

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As 2023 winds down, it is natural to reflect on the year and measure corn and soybean profitability as compared to previous years. There also are several things we can learn when looking at the 2024 corn and soybean budgets to use when navigating the farm over the next year.

The average budgeted return over total economic costs for Indiana corn and soybeans from 2021 to 2024 are reported in Table 1 to gauge the economic health of corn and soybean farmers. Purdue University *Crop Enterprise Budgets* for rotation corn and rotation soybeans for a 1,000-acre farm are modified to calculate the average returns for each year. The first modification is to use the state average yields instead of those assumed when developing the budgets. The second modification is to substitute the Indiana marketing year average cash price for the prices assumed in the budget. Because the marketing year for both crops is from September to August, a marketing year price is unavailable for 2023 or 2024. The October Indiana average cash price is used in evaluating profitability in 2023. Similarly, the prices assumed in the 2024 enterprise budgets are used for this analysis.

The first takeaway message from Table 1 is that the contribution margin, or return over total variable costs, is projected to be much lower for 2023 and 2024 than the previous two years as prices transition lower from near-record levels. Total direct costs remain higher than in 2021, even as fertilizer prices are lower than last year.

The U.S. soybean market ending stocks remain relatively tight, but a large South American crop would limit the price potential for U.S. soybeans. Similarly, the U.S. corn market has rebuilt its stocks with limited potential for higher prices. The wildcard remains Brazilian weather that limits their first or second crops. Major importers like China *may* purchase American corn and soybeans in the next few weeks to hedge against South American production problems. Farmers should pay attention for pricing opportunities.

The second takeaway message is that the return over total costs is projected to be negative for the 2023 and 2024 crops. Remember that this budget includes all economic costs, including a charge for unpaid operator labor and a rental charge for owned land. Alternatively, a budget based on cash accounting, like farmers use for income tax purposes, would only include actual costs paid and would not be as pessimistic.

Regardless, the point remains that profit margins are tightening and may be negative for those with higher debt levels or are less efficient in managing costs. Farmers who rent a large percentage of their land base will feel the impact of the tightening margins more than those who own most of their land base. Specifically, young and beginning farmers may be more affected by these tightening margins than more established farmers as these newer farmers are establishing their land base.

The final point is that the annual machinery overhead cost is a proxy for the annual debt and interest payment on equipment. Farms that have increased machinery capacity without increased land base may have a larger per-acre cost than reflected in the budgets.

Similarly, the overhead cost for paid and unpaid labor often serves as a proxy for family living expenses. Data from the Illinois Farm Business Farm Management records program reports the average family living expense for 1,300-grain farms was \$91,000 in 2022. The average size of the grain farms participating in this program tends to be smaller, with the average size of a grain farm in the program at about 1,100 acres. Farmers should fine-tune their budgets to reflect a realistic amount that each acre *must* provide for the family, which may be greater than the amount budgeted by the university, even after the contributions from off-farm employment.

Budgets are a great management tool. Suppose your farm and personal financial records are less helpful than you would like. In that case, I encourage you to make a New Year's resolution to find a record-keeping system that will provide the information needed to develop your own budgets to make better marketing and financial management decisions. Your farm financial information will help you navigate your farm through years of tight profit margins.

**Table 1 included on next page.*

Table 1. Budgeted Costs and Returns for Indiana Rotation Corn and Soybeans on Average Soils from 2021 to 2024.

		Rotation Corn			
		2021	2022	2023 (F)	2024 (Budgeted)
a.	State Avg. Corn Yield	195	190	200	190
b.	Marketing Year Avg. Price *	<u>\$6.07</u>	<u>\$6.48</u>	<u>\$4.85</u>	<u>\$4.80</u>
a x b	Revenue	\$1,184	\$1,231	\$970	\$912
c	Total Direct Costs	<u>\$424</u>	<u>\$660</u>	<u>\$683</u>	<u>\$626</u>
a x b - c	Corn Contribution Margin	\$760	\$571	\$287	\$286
		Rotation Soybeans			
		2021	2022	2023 (F)	2024 (Budgeted)
a.	State Avg. Soybean Yield	60	57.5	61	58
b.	Marketing Year Avg. Price *	<u>\$13.30</u>	<u>\$14.40</u>	<u>\$12.80</u>	<u>\$12.40</u>
a x b	Revenue	\$798	\$828	\$781	\$719
c	Total Direct Costs	<u>\$243</u>	<u>\$329</u>	<u>\$345</u>	<u>\$335</u>
a x b - c	Soybean Contribution Margin	\$555	\$499	\$436	\$384
		Contribution Margin Corn-Soybean Rotation			
		2021	2022	2023 (F)	2024 (Budgeted)
d	Rotation Contribution Margin	\$657	\$535	\$361	\$335
		Budgeted Overhead Costs for a 1,000 acre farm (\$/acre)			
		2021	2022	2023 (F)	2024 (Budgeted)
e	Annual Machinery	\$130	\$130	\$139	\$139
f	Paid / Unpaid Labor	\$64	\$56	\$64	\$64
g	Cash Rent **	<u>\$227</u>	<u>\$252</u>	<u>\$257</u>	<u>\$253</u>
g	Total Overhead Costs	\$421	\$438	\$460	\$456
		Return over Total Costs			
		2021	2022	2023 (F)	2024 (Budgeted)
d-g	\$/Acre	\$236	\$97	-\$99	-\$121

Source: Purdue University Extension Budgets from 2021 to 2024; Indiana Agricultural Statistics for yields and cash prices; Purdue University Cash Rent Surveys from 2020 to 2023.

* October average cash price for corn and soybeans (USDA-NASS) for 2023 and Purdue University Budget for 2024.

** Purdue University Land Value and Cash Rental Rate Surveys for Indiana from 2020 to 2023.