

LTAR Profitability Comparison for Corn in 2022



ASP	Notes	BAU
	Primary tillage	\$20.00
	Secondary tillage	\$10.00
Manure app	\$10/ton + \$35/Acre Application Cost	\$145.00
	Lower seeding rate, variable rate seeds and lower cost hybrid	
Planting + Fertilizer		\$166.00
Pre-Emerge Herbicide		\$21.00
Post-Emerge Herbicide		\$39.00
Inter-seeding Cover Crops		
Fertilizer (injected @ V3) app		\$120.00
Fertilizer app (injected @ V6)		\$55.00
Fungicide		\$30.00
Harvest	Per acre cost of running the combine	\$65.00
Handling and Drying	\$0.40 per bushel at 20% moisture	\$86.76
Cost of Production		\$757.76
2022 Crop Price: \$6.50		
Based on Plots Yields		
Yield	200.1	216.9
Gross Profit	\$1,300.65	\$1,409.85
Net Profit	\$629.61	\$652.09
Based on Field Yields		
Yield	193.8	205.9
Gross Profit	\$1,259.70	\$1,338.35
Net Profit	\$588.66	\$580.59
Based on Average of Plot and Field		
Yield	197.0	213.7
Gross Profit	\$1,280.50	\$1,389.05
Net Profit	\$609.46	\$631.29

Table 1: A per acre profitability comparison for LTAR corn production in 2022. Though yields in the aspirational plots (ASP) were lower than the yields business as usual (BAU) plots, the net profit per acre between the two systems were similar largely due to the lower production cost of in the ASP plots.



LTAR Profitability Comparison for Soybeans in 2022

ASP	Notes	BAU
		Primary tillage \$20.00
		Secondary tillage \$10.00
Fertilizer app	Accounting for fertility from the manure application in the system	Fertilizer app \$157.00
Planting	No seed treatment in ASP	Planting \$70.00
Pre-Emerge Herbicide	Glyphosate needed in ASP for burn-down	Pre-Emerge Herbicide \$40.00
Post-Emerge Herbicide		Post-Emerge Herbicide \$35.00
Harvest	Per acre cost of running the combine	Harvest \$65.00
Handling and Drying	\$0.25 per bushel	Handling and Drying \$19.03
Cost of Production		\$416.03
	2022 Crop Price: \$6.50	
Based on Plots Yields		
Yield	70.0	Yield 76.0
Gross Profit	\$1,050.00	Gross Profit \$1,140.00
Net Profit	\$751.58	Net Profit \$723.98
Based on Field Yields		
Yield	69.7	Yield 76.1
Gross Profit	\$1,045.50	Gross Profit \$1,141.50
Net Profit	\$747.08	Net Profit \$725.48
Based on Average of Plot and Field		
Yield	69.9	Yield 76.05
Gross Profit	\$1,047.75	Gross Profit \$1,140.75
Net Profit	\$749.33	Net Profit \$724.73

Table 2: A per acre profitability comparison for LTAR soybean production in 2022. Though yields in the aspirational plots (ASP) were lower than the yields business as usual (BAU) plots, the net profit per acre was greater in the soybean ASP plots due to the lower production cost compared to the BAU plots.

Table 3: Hypothesized production output for the KBS LTAR business-as-usual (BAU) and the aspirational system's (ASP) across a 5-year timeframe. Compiled by Dr. Brook Wilke and Marc Hasenick, 2021.

KBS LTAR Croplands Common Experiment Subset of Estimated Production Metrics		
	BAU	ASP
Plant species diversity (Richness/5 years)	2 species	38+ species
Living roots (days/year)	160	350
Grain Yield (lbs/acre/5 years)	22,500 corn, 7,500 soybean 50.49M Calories 4,680 lbs protein	10,000 corn, 3,000 beans, 5,000 wheat, 2,500 canola 34.32M Calories 3,085 lbs protein
Grain Profit (\$/acre/year)	\$132.50	\$106.00
Forage Yield (dry lbs/acre/5 years)	0	14,000
Forage Profit (\$/acre/year)	0	\$91.75 - \$200
Cattle Supported (#/acre/year)	0	0.25 700,000 calories beef
N Fertilizer (lbs/acre/5 years)	450	200
Manure produced (dry matter lbs/acre/5 years)	0	4,500