

Southeast Missouri Soybean (Double-Crop) Planning Budget

Using this planning budget, soybean producers may estimate their costs and returns for 2025. Table 1 presents estimates for GMO center-pivot-irrigated double-crop soybean production in southeast Missouri. Assumptions were based on price forecasts as of October 2024. Detailed prices and practices are summarized in Tables 2 and 3. The production practices used to develop these cost estimates are common for southeast Missouri farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2025.

Table 1. Southeast Missouri soybean (irrigated, double-crop) planning budget for 2025.

	Dollars per acre ¹	Your estimate
Income		
Grain sales	562.10	
Government payments	0.00	
Total income	562.10	
Operating costs		
Seed	66.43	
Fertilizer and soil amendments	56.60	
Crop protection chemicals	100.00	
Irrigation ²	140.70	
Crop supplies, storage, and marketing	8.00	
Crop consulting and insurance	24.00	
Custom hire and rental	15.02	
Operator labor and management	26.98	
Machinery fuel	11.43	
Machinery repairs and maintenance	29.95	
Operating interest	18.57	
Total operating costs	497.68	
Ownership costs		
Farm business overhead	5.62	
Machinery ownership	46.31	
Real estate charge	112.50	
Total ownership costs	164.43	
Total costs	662.10	
Income over operating costs	64.42	
Income over total costs	-100.00	
Return to land and management	29.36	
	Operating costs per bushel	9.05
	Ownership costs per bushel	2.99
	Total costs per bushel	12.04

1. Totals may not sum due to rounding.

2. Irrigation costs are explained in detail on page 2.

Written by

Drew Kientzy, Research Analyst, Agricultural Business and Policy; **Ben Brown**, Extension Specialist, Agricultural Business and Policy; **Justin Calhoun**, Assistant Professor, Plant Science and Technology

Irrigation costs in Table 1 include fuel, labor and any leveling, ditching or leveeing required for irrigation; and ownership costs for the pumping engine and aboveground irrigation systems.

Table 2 shows input assumptions for the soybean budget. Price estimates reflect harvest time prices. Costs or returns from storage or other marketing methods are not included. Farm business overhead includes liability insurance, utilities, accounting, etc. Real estate charge is an estimated rental rate for above average land and assumes double-crop soybeans are preceded by winter wheat.

Table 3 details the field activities assumed in this budget and their machinery costs. Machinery costs were estimated using typical life (years), use (hours) and performance (fuel and labor) factors for each power unit and implement used.

Producers can customize this budget using the Southeast Missouri Crop Budget spreadsheet, which can be downloaded from the [Missouri Crop and Livestock Enterprise Budgets webpage](https://extension.missouri.edu/programs/agricultural-business-and-policy-extension/missouri-crop-and-livestock-enterprise-budgets) (extension.missouri.edu/programs/agricultural-business-and-policy-extension/missouri-crop-and-livestock-enterprise-budgets).

Table 2. Input assumptions used in Southeast Missouri soybean (irrigated, double-crop) planning budget for 2025.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Yield, bushels	55	Soybean market price, per bushel	10.22
Seeding rate, count	155,000	Seed, per 140,000 seed bag	60.00
Phosphorus rate, pounds P ₂ O ₅	46	Phosphorus, per pound P ₂ O ₅	0.45
Potassium rate, pounds K ₂ O	80	Potassium, per pound K ₂ O	0.38
Sulphur rate, pounds S	10	Sulphur, average price per pound	0.55
Sum of allocated labor, hours	0.51	Skilled labor, per hour	20.00
Irrigation water, acre-inches applied	12.0	Irrigation water applied, cost per acre-inch	11.72
Operating interest, annual percentage	7.75	Farm diesel, per gallon	3.25

Table 3. Machinery assumptions used in Southeast Missouri soybean (irrigated, double-crop) planning budget for 2025, on a per acre basis.

Machine activity (not custom fieldwork)	Trips across field	Labor (hours)	Fuel (gallons)	Operating costs ¹ (dollars)	Ownership costs ² (dollars)	Total costs (dollars)
Row crop planter (40 feet), 280 HP MFWD	1	0.05	0.66	8.71	16.60	25.31
Self-propelled boom sprayer (120 feet), 275 HP	2	0.02	0.22	11.16	2.89	14.05
Draper platform (45 feet), 440 HP combine	1	0.06	0.97	14.80	14.40	29.20
Grain trailer (1,000 bushel), 475 HP road tractor		0.07	0.43	3.99	1.96	5.95
Grain cart (1,000 bushel), 280 HP MFWD		0.03	0.37	3.43	4.85	8.28
Grain auger (13 inch), 130 HP MFWD		0.02	0.11	1.31	1.32	2.63
Pickup (1 ton), 4WD		0.25	0.75	8.09	4.30	12.39
Dry fertilizer application, custom charge	1					7.02
Aerially apply chemicals, custom charge	1					8.00
Total³		0.51	3.52	51.50	46.31	112.83

1. Machinery operating cost is the sum of fuel, repairs, maintenance, and the value of labor.

2. Machinery ownership cost is the sum of machinery overhead and depreciation.

3. Totals may not sum due to rounding.

Abbreviations: 4WD = 4-wheel drive tractor or truck; HP = horsepower; MFWD = mechanical front-wheel drive tractor