

Southeast Missouri Soybean Planning Budget

Using this planning budget, soybean producers may estimate their costs and returns for 2025. Table 1 presents estimates for GMO furrow-irrigated 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 (furrow-irrigated) planning budget for 2025.

	Dollars per acre ¹	Your estimate
Income		
Grain sales	643.86	
Government payments	20.00	
Total income	663.86	
Operating costs		
Seed	69.64	
Fertilizer and soil amendments	80.20	
Crop protection chemicals	109.00	
Irrigation ²	119.22	
Crop supplies, storage, and marketing	8.00	
Crop consulting and insurance	32.00	
Custom hire and rental	15.02	
Operator labor and management	33.17	
Machinery fuel	18.28	
Machinery repairs and maintenance	33.77	
Operating interest	20.08	
Total operating costs	538.38	
Ownership costs		
Farm business overhead	6.64	
Machinery ownership	66.19	
Real estate charge	225.00	
Total ownership costs	297.83	
Total costs	836.21	
Income over operating costs	125.48	
Income over total costs	-172.35	
Return to land and management	72.57	
	Operating costs per bushel	8.55
	Ownership costs per bushel	4.73
	Total costs per bushel	13.27

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.

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) planning budget for 2025.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Yield, bushels	63	Soybean market price, per bushel	10.22
Seeding rate, count	130,000	Seed, per 140,000 seed bag	75.00
Phosphorus rate, pounds P ₂ O ₅	50	Phosphorus, per pound P ₂ O ₅	0.45
Potassium rate, pounds K ₂ O	95	Potassium, per pound K ₂ O	0.38
Sulphur rate, pounds S	12	Sulphur, average price per pound	0.55
Lime rate, tons	0.50	Lime, per ton	30.00
Sum of allocated labor, hours	0.66	Skilled labor, per hour	20.00
Irrigation water, acre-inches applied	18.0	Irrigation water applied, cost per acre-inch	6.62
Operating interest, annual percentage	7.75	Farm diesel, per gallon	3.25

Table 3. Machinery assumptions used in Southeast Missouri soybean (irrigated) 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)
Subsoiler (20 feet), 340 HP MFWD	1/3 ³	0.04	0.54	3.35	4.46	7.81
Disk bedder (36 feet), 280 HP MFWD	1	0.06	0.74	4.88	6.65	11.53
Bed leveler (36 feet), 340 HP MFWD	1	0.06	0.90	5.56	7.48	13.05
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	0.15	11.16	4.18	15.34
Draper platform (45 feet), 440 HP combine	1	0.06	0.97	14.80	14.40	29.20
Grain cart (1,000 bushel), 280 HP MFWD		0.03	0.37	3.43	4.85	8.28
Grain trailer (1,000 bushel), 475 HP road tractor		0.07	0.43	3.99	1.96	5.95
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	2					8.00
Total⁴		0.66	5.62	65.29	66.19	146.50

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. One pass every three years.

4. Totals may not sum due to rounding.

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



Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director, Cooperative Extension, University of Missouri, Columbia, MO 65211 • MU Extension provides equal opportunity to all participants in extension programs and activities and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability or protected veteran status. • 573-882-7216 • extension.missouri.edu