

Soybean (Dryland) Planning Budget

Using this planning budget, soybean farmers may estimate their costs and returns for 2022. Table 1 presents estimates for dryland soybean production in northern, central and southwest Missouri. Assumptions were based on price forecasts as of October 2021. Detailed prices and practices are summarized in Tables 2 and 3. The production practices used to develop these cost estimates are common for Missouri farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2022.

Table 1. Missouri soybean (dryland) planning budget for 2022.

	Dollars per acre ¹	Your estimate
Income		
Grain sales	662.75	
Other income	0.00	
Total income	662.75	
Operating costs		
Seed	65.73	
Fertilizer and soil amendments	88.80	
Crop protection chemicals	55.00	
Crop supplies, storage, and marketing	3.50	
Crop consulting and insurance	17.00	
Custom hire and rental	6.00	
Machinery fuel, drying, and irrigation energy	15.06	
Machinery repairs and maintenance	21.95	
Operator and hired labor	16.45	
Operating interest	7.09	
Total operating costs	296.59	
Ownership costs		
Farm business overhead	4.00	
Machinery overhead	18.35	
Machinery depreciation	33.04	
Real estate charge	168.00	
Total ownership costs	223.39	
Total costs	519.97	
Income over operating costs	366.16	
Income over total costs	142.78	
Operating costs per bushel	5.39	
Ownership costs per bushel	4.06	
Total costs per bushel	9.45	

¹ Totals may not sum due to rounding.

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Table 2 shows input assumptions for the dryland soybean budget. Price estimates reflect harvest time prices. Costs or returns from storage or other marketing methods are not included. No income from government programs are added. Farm business overhead includes liability insurance, utilities, accounting, etc. Real estate charge is an estimated rental rate for above average land.

Table 2. Input assumptions used in soybean (dryland) planning budget for 2022.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Yield, bushels	55	Soybean market price, per bushel	12.05
Seeding rate, count	170,000	Seed, per 150,000 seed bag	58.00
Phosphorus rate, pounds P ₂ O ₅	46	Phosphorus, per pound P ₂ O ₅	0.65
Potassium rate, pounds K ₂ O	80	Potassium, per pound K ₂ O	0.58
Lime rate, tons	0.5	Lime, per ton	25.00
Sum of allocated labor, hours	0.87	Skilled labor, per hour	23.00
		Farm diesel, per gallon	2.91

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.

Table 3. Machinery assumptions used in soybean (dryland) planning budget for 2022, on a per acre basis.

Machine activity (not custom fieldwork)	Labor (hours)	Fuel (gallons)	Operating costs ¹ (dollars)	Ownership costs ² (dollars)	Total costs (dollars)	Trips across field
Tandem disk (30 feet); 360 4WD	0.06	0.91	5.22	7.89	13.11	1
Row crop planter (16 row); 225 MFWD	0.05	0.53	5.69	12.48	18.17	1
Boom sprayer (90 feet); 130 MFWD	0.04	0.25	3.00	4.67	7.67	2
Combine, flexible grain head (25 feet); 275 HP	0.13	1.63	20.29	14.48	34.77	1
Grain cart (500 bushel); 225 MFWD	0.07	0.67	4.73	7.49	12.22	
Grain auger (5,000 bushels per hour); 130 MFWD	0.01	0.06	0.48	0.44	0.92	
Semi, tractor and trailer		0.74	3.59	1.89	5.47	
Pickup truck		0.33	1.71	2.05	3.76	
Total³	0.37	5.11	44.71	51.39	96.10	5

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; MFWD = mechanical front-wheel drive tractor; HP = horsepower

Farmers can also customize this budget to fit their own operations by using the [Missouri Crop Budget Generator](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/CropBudgetGenerator.xlsm) (https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/CropBudgetGenerator.xlsm). Download the spreadsheet tool to create an electronic copy of your cost and return estimates for soybeans and other crops in Missouri.