

Grain Sorghum Planning Budget

Using this planning budget, sorghum producers may estimate their costs and returns for 2026. Table 1 presents estimates for grain sorghum production in northern, central and southwest Missouri. Assumptions were based on price forecasts as of October 2025. 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 2026.

Table 1. Missouri grain sorghum planning budget for 2026.

	Dollars per acre	Your estimate
Income		
Grain sales	354.60	
Government payments	25.00	
Total income	379.60	
Operating costs		
Seed	10.50	
Fertilizer and soil amendments	111.95	
Crop protection chemicals	53.50	
Crop supplies, storage, and marketing	8.00	
Crop consulting and insurance	15.00	
Custom hire and rental	7.37	
Operator labor	11.85	
Machinery fuel	11.18	
Machinery repairs and maintenance	21.29	
Management	11.39	
Operating interest	9.50	
Total operating costs ¹	271.53	
Ownership costs		
Farm business overhead	11.39	
Machinery ownership	56.39	
Real estate charge	145.00	
Total ownership costs ²	212.78	
Total costs ³	484.31	
Income over operating costs	108.07	
Income over total costs	-104.71	
Return to land and management	51.68	

Note: Totals may not sum due to rounding.

1. Operating costs per bushel = \$3.02.
2. Ownership costs per bushel = \$2.36.
3. Total costs per bushel = \$5.38.

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Table 2 shows input assumptions for the grain sorghum 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 marginal cropland.

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 2. Input assumptions used in grain sorghum planning budget for 2026.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Yield, bushels	90	Grain sorghum market price, per bushel	3.94
Seeding rate, count	70,000	Seed, per 600,000 seed bag	90.00
Nitrogen rate, pounds N	70	Nitrogen, per pound N	0.70
Phosphorus rate, pounds P ₂ O ₅	45	Phosphorus, per pound P ₂ O ₅	0.73
Potassium rate, pounds K ₂ O	30	Potassium, per pound K ₂ O	0.42
Lime rate, tons	0.5	Lime, per ton	35.00
Skilled operator labor, hours	0.43	Skilled operator labor, per hour	27.50
Operating interest, annual percentage	7.25	Farm diesel, per gallon	2.90

Table 3. Machinery assumptions used in grain sorghum planning budget for 2026, on a per acre basis.

Machine activity (including custom fieldwork)	Passes per acre	Fuel (gallons)	Labor (hours)	Operating costs ¹ (dollars)	Ownership costs ² (dollars)	Total costs (dollars)
Tandem disk (32 feet), 340 HP MFWD	1	0.76	0.05	7.36	10.77	18.14
Row crop planter (40 feet), 280 HP MFWD	1	0.62	0.05	11.39	16.87	28.27
Boom sprayer (90 feet), 130 HP MFWD	2	0.17	0.03	2.48	3.24	5.72
Draper platform (35 feet), 350 HP combine	1	1.29	0.07	12.55	19.39	31.94
Grain trailer (1,000 bushel), 475 HP semi truck		0.43	0.07	3.37	2.30	5.67
Tandem grain truck (600 bushel), 325 HP		0.29	0.06	2.64	0.81	3.44
Grain auger (13 inch), 130 MFWD					0.97	0.97
Pickup (1 ton), 4WD		0.30	0.10	4.53	2.03	6.56
Apply fertilizer, custom charge	1					7.37
Total		3.86	0.43	44.32	56.39	108.08

Note: Totals may not sum due to rounding.

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

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.

Producers can customize this budget using the [Missouri Crop Budgets workbook \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/crop-budgets.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/crop-budgets.xlsx). Each crop budget has an accompanying sensitivity analysis so producers can see how their financial return to land and management varies with different crop yields and crop prices.



Check out the complete collection of Missouri crop and livestock enterprise budgets at muext.us/MissouriAgBudgets