

Mixed Grass Hay Planning Budget

Using this planning budget, farmers growing hay can estimate their costs and returns for 2025. Table 1 presents estimates for established tall fescue and clover hay production in 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 on Missouri farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2025.

Table 1. Missouri mixed grass hay planning budget for 2025.

	Dollars per acre ¹	Your estimate
Income		
Hay	345.00	
Grazing	20.00	
Other income	0.00	
Total income	365.00	
Operating costs		
Seed	0.00	
Fertilizer and soil amendments	108.25	
Crop protection chemicals	0.00	
Crop supplies, storage, and marketing	15.00	
Crop consulting and insurance	23.00	
Custom hire and rental	37.25	
Machinery fuel	6.82	
Machinery repairs and maintenance	13.62	
Operator and hired labor	19.50	
Operating interest	8.66	
Total operating costs	232.09	
Ownership costs		
Farm business overhead	22.95	
Machinery ownership	23.85	
Real estate charge	45.00	
Total ownership costs	91.80	
Total costs	323.89	
Income over operating costs	132.91	
Income over total costs	41.11	

1. Totals may not sum due to rounding.

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Table 2 shows input assumptions for the mixed grass hay budget. Price estimates reflect harvest time prices. Costs or returns from storage or other marketing methods are not included. No income from government programs is added.

Table 3 details the field activities for 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.

Farmers can customize this budget using the Missouri Forage Budgets spreadsheet, which can be downloaded from the forages section of the [Missouri Crop and Livestock Enterprise Budgets webpage](http://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 mixed grass hay planning budget for 2025.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Hay yield, tons, 10% moisture	3	Hay price, per ton	115.00
Pasture yield, animal unit month	1	Pasture price, per animal unit month	20.00
Nitrogen rate, pounds N	60	Nitrogen, per pound N	0.60
Phosphorus rate, pounds P ₂ O ₅	35	Phosphorus, per pound P ₂ O ₅	0.55
Potassium rate, pounds K ₂ O	100	Potassium, per pound K ₂ O	0.38
Lime rate, tons	0.50	Lime, per ton	30.00
Labor, hours	1.05	Labor wage, per hour	18.50
Operating interest, annual percentage	7.75	Farm diesel, per gallon	3.25

Table 3. Machinery assumptions used in mixed grass hay planning budget for 2025, on a per acre basis.

Machine activity (including custom fieldwork)	Trips across field	Labor (hours)	Fuel (gallons)	Operating costs ¹ (dollars)	Ownership costs ² (dollars)	Total costs (dollars)
Disk mower (9 feet), 105 HP MFWD	1	0.18	0.81	8.98	7.98	16.96
Hay rake (30 feet), 75 HP TWD	1	0.04	0.14	1.59	1.44	3.03
Round baler, net wrap (30 feet), 105 HP MFWD	1	0.08	0.39	10.42	10.19	20.62
Pickup (1 ton), 4WD		0.25	0.75	9.69	4.24	13.92
Dry fertilizer application, custom charge	1					7.25
Move round bales on farm, custom charge						30.00
Total³		0.55	2.10	30.68	23.85	91.78

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; TWD = 2-wheel drive tractor; MFWD = mechanical front-wheel drive tractor; HP = horsepower