

# Cool-Season Grass Hay Planning Budget

Using this planning budget, farmers growing hay can estimate their costs and returns for 2026. Table 1 presents estimates for established cool-season grass hay production in 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 on Missouri farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2026.

**Table 1. Missouri cool-season grass hay (round bale) planning budget for 2026.**

	Dollars per acre	Your estimate
<b>Income</b>		
Hay	241.50	
Grazing	24.50	
Other income	0.00	
<b>Total income</b>	<b>266.00</b>	
<b>Operating costs</b>		
Seed	0.00	
Fertilizer and soil amendments	127.05	
Crop protection chemicals	0.00	
Crop supplies, storage, and marketing	15.00	
Crop consulting and insurance	0.00	
Custom hire and rental	29.42	
Operator labor	11.03	
Machinery fuel	6.06	
Machinery repairs and maintenance	14.29	
Management	7.98	
Operating interest	7.64	
<b>Total operating costs</b>	<b>218.46</b>	
<b>Ownership costs</b>		
Farm business overhead	15.96	
Machinery ownership	27.72	
Real estate charge	45.00	
<b>Total ownership costs</b>	<b>88.68</b>	
<b>Total costs</b>	<b>307.14</b>	
<b>Income over operating costs</b>	<b>47.54</b>	
<b>Income over total costs</b>	<b>-41.14</b>	
<b>Return to land and management</b>	<b>11.84</b>	

Note: Totals may not sum due to rounding.

Developed by

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Table 2 shows input assumptions for the cool-season 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.

**Table 2. Input assumptions used in cool-season grass hay (round bale) planning budget for 2026.**

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Hay yield, tons	2.1	Hay price, per ton	115.00
Pasture yield, cow-day	35	Pasture price, per cow-day	0.70
Nitrogen rate, pounds N	60	Nitrogen, per pound N	0.70
Phosphorus rate, pounds P <sub>2</sub> O <sub>5</sub>	35	Phosphorus, per pound P <sub>2</sub> O <sub>5</sub>	0.73
Potassium rate, pounds K <sub>2</sub> O	100	Potassium, per pound K <sub>2</sub> O	0.42
Lime rate, tons	0.50	Lime, per ton	35.00
Operator labor, hours	0.50	Operator labor wage, per hour	22.00
Operating interest, annual percentage	7.25	Farm diesel, per gallon	2.90

**Table 3. Machinery assumptions used in cool-season grass hay (round bale) planning budget for 2026, on a per acre basis.**

Machine activity (including custom fieldwork)	Passes per acre	Fuel (gallons)	Labor (hours)	Operating costs <sup>1</sup> (dollars)	Ownership costs <sup>2</sup> (dollars)	Total costs (dollars)
Disk mower/conditioner (12 feet), 130 HP MFWD	1	0.76	0.13	9.31	10.60	19.92
Hay rake (30 feet), 75 HP TWD	1	0.13	0.04	1.71	1.81	3.52
Round baler, net wrap (30 feet), 130 HP MFWD	1	0.45	0.08	8.21	10.23	18.44
Pickup (1 ton), 4WD		0.75	0.25	12.14	5.07	17.21
Dry fertilizer application, custom charge	1					7.37
Move round bales on farm, custom charge						22.05
<b>Total</b>		<b>2.09</b>	<b>0.50</b>	<b>31.37</b>	<b>27.72</b>	<b>88.51</b>

Note: 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.

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.

Farmers can customize this budget using the [Missouri Forage Budgets workbook \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/forage-budgets.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/forage-budgets.xlsx).



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