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Alfalfa Small Bales Planning Budget

Using this planning budget, farmers growing alfalfa can estimate their costs and returns associated with producing small square bales in 2025. Detailed alfalfa establishment costs are found in MU Extension publication G661, Alfalfa Establishment Planning Budget (extension.missouri.edu/publications/g661). Table 1 presents estimates for established Roundup Ready alfalfa with small bale production. 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. Farmers can modify this budget based on their circumstances. For example, an alfalfa large round bale planning budget could be developed by modifying machinery activities and hay sales. Use the "Your estimate" column to plan your operation's costs and returns for 2025.

Table 1. Missouri alfalfa small bales planning budget for 2025.

	Dollars per acre[1]	Your estimate
Income		
Hay sales (60 pound bales)	1,350.00	
Other income	0.00	
Total income	1,350.00	
Operating costs		
Seed	0.00	
Fertilizer and soil amendments	103.50	
Crop protection chemicals	41.48	
Crop supplies, storage, and marketing	112.50	
Crop consulting and insurance	23.00	
Custom hire and rental	149.04	
Machinery fuel	22.64	
Machinery repairs and maintenance	19.66	
Operator and hired labor	50.50	
Operating interest	20.24	
Total operating costs	542.55	
Ownership costs		
Farm business overhead	22.95	
Machinery ownership	99.20	
Alfalfa establishment (amortized, 4 years)	151.32	
Real estate charge	130.00	
Total ownership costs	403.48	
Total costs	946.03	
Income over operating costs	**807.45**	
Income over total costs	**403.97**	

1. Totals may not sum due to rounding.

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Table 2 shows input assumptions for the alfalfa small bales budget. Price estimates reflect harvest time prices out-of-the-field. 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 (extension.missouri.edu/programs/agricultural-business-and-policy-extension/missouri-crop-and-livestock-enterprise-budgets).

Table 2. Input assumptions used in alfalfa small bales planning budget for 2025.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Forage yield, 60 pound bales	150	Alfalfa market price, per bale	9.00
Phosphorus rate, pounds P_2O_5	50	Phosphorus, per pound P_2O_5	0.55
Potassium rate, pounds K_2O	200	Potassium, per pound K_2O	0.38
Labor, hours	2.73	Labor wage, per hour	18.50
Operating interest, annual percentage	7.75	Farm diesel, per gallon	3.25

Table 3. Machinery assumptions used in alfalfa small bales 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)
Boom sprayer, pull-type (90 feet), 130 HP MFWD	1	0.02	0.12	1.34	6.57	7.91
Disk mower/conditioner (12 feet), 130 HP MFWD	4	0.53	3.03	28.55	44.70	73.25
Hay tedder (16 feet), 75 HP TWD	2	0.12	0.40	3.95	2.93	6.88
Hay rake (20 feet), 75 HP TWD	4	0.26	0.85	8.37	6.78	15.15
Small square baler (20 feet), 75 HP TWD	4	0.55	1.82	22.39	33.98	56.37
Pickup (1 ton), 4WD		0.25	0.75	9.69	4.24	14.00
Dry fertilizer application, custom charge	2					14.04
Accumulate/stack/haul small square bales (mechanical collection), custom charge						135.00
Total[3]		**1.73**	**6.97**	**74.29**	**99.20**	**322.53**

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

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