

Fescue - Clover Hay Planning Budget

Using this planning budget, farmers growing hay can estimate their costs and returns for 2022. Table 1 presents estimates for established fescue-clover hay production in 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 on Missouri farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2022.

Table 1. Missouri fescue-clover hay planning budget for 2022.

	Dollars per acre ¹	Your estimate
Income		
Hay	255.00	
Grazing	16.00	
Other income	0.00	
Total income	271.00	
Operating costs		
Seed	0.00	
Fertilizer and soil amendments	105.20	
Crop protection chemicals	0.00	
Crop supplies, storage, and marketing	14.00	
Custom hire and rental	26.25	
Machinery fuel and irrigation energy	6.67	
Machinery repairs and maintenance	12.06	
Operator and hired labor	11.53	
Operating interest	4.30	
Total operating costs	180.02	
Ownership costs		
Farm business overhead	5.63	
Machinery overhead	8.79	
Machinery depreciation	11.67	
Real estate charge	64.60	
Total ownership costs	90.69	
Total costs	270.71	
Income over operating costs	90.98	
Income over total costs	0.29	

¹ Totals may not sum due to rounding.

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Table 2 shows input assumptions for the fescue-clover 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 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 fescue-clover hay planning budget for 2022.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Hay yield, tons, 10% moisture	3	Hay price, per ton	85.00
Pasture yield, animal unit month	1	Pasture price, per animal unit month	16.00
Nitrogen rate, pounds N	40	Nitrogen, per pound N	0.70
Phosphorus rate, pounds P ₂ O ₅	46	Phosphorus, per pound P ₂ O ₅	0.65
Potassium rate, pounds K ₂ O	60	Potassium, per pound K ₂ O	0.58
Lime rate, tons	0.50	Lime, per ton	25.00
Sum of allocated labor, hours	0.57	Skilled labor, per hour	23.00
		Farm diesel, per gallon	2.91

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 3. Machinery assumptions used in fescue-clover hay 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
Disk mower-conditioner (9 feet); 130 MFWD	0.18	1.01	8.86	8.90	17.76	1
Wheel rake (2-16'); 75 2WD	0.04	0.13	1.34	1.62	2.96	1
Round baler, net wrap (1500 pound); 130 MFWD	0.11	0.61	13.01	6.76	19.77	1
Pickup truck		0.52	2.67	3.20	5.86	
Total³	0.32	2.26	25.89	20.47	46.36	3

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: 2WD = 2-wheel drive tractor; MFWD = mechanical front-wheel drive tractor

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