

Beef Heifer Planning Budget

This budget presents information useful to beef farmers. Table 1 presents estimates for the 2021 year for buying heifer calves and selling as bred replacement heifers in Missouri. Assumptions were based on price forecasts as of October 2020. Detailed assumptions are summarized in Tables 2-4. The production practices used to develop these cost estimates are common for beef farms in Missouri. Farmers are encouraged to customize this budget to fit their operation.

Table 1. Missouri beef heifer planning budget for 2021.

	Per heifer sold ¹	Your estimate
Income		
Bred heifer sales (0.875 head)	1,268.75	
Cull heifer sales (0.05 head)	67.50	
Yearling heifer sales (0.075 head)	72.00	
Less death loss (1 percent of heifer sales)	14.08	
Total income	1,394.17	
Operating costs		
Purchased heifer calf	741.51	
Pasture	130.73	
Feed, mineral and stored forage	173.40	
Labor	77.50	
Veterinary, drugs and supplies	30.00	
Marketing costs	42.25	
Breeding costs	37.50	
Machinery and utilities	93.96	
Livestock facility repairs	8.00	
Miscellaneous	6.00	
Operating and calf interest	48.10	
Total operating costs	1,388.95	
Ownership costs		
Depreciation on livestock facilities	8.45	
Interest on livestock facilities	6.77	
Insurance and taxes on capital items	13.15	
Total ownership costs	28.37	
Total costs	1,417.31	
Income over operating costs	5.22	
Income over total costs	-23.15	
Total cost per head per day (excluding calf price)	1.78	
Total cost per pound of gain	1.61	
Bred heifer breakeven price per head	1,477.24	

¹ Totals may not sum due to rounding.

Table 2. Input assumptions used in replacement beef heifer planning budget for 2021.

Selected input quantities	Per unit	Selected input prices	Dollars per unit
Heifer purchase weight, pounds	550	Heifer purchase price, per hundredweight	134.82
Yearling cull heifer sale weight, pounds	750	Yearling cull heifer sale price, per hundredweight	128.00
Heavy cull heifer sale weight, pounds	1,000	Heavy cull heifer sale price, per hundredweight	135.00
Bred heifer sale weight, pounds	1,000	Bred heifer sale price, per head	1,450.00
Labor, hours	5	Labor cost, per hour	15.50
Pasture, animal unit months	8.17	Pasture, per animal unit month	16.00

Table 3. Feed and stored forage requirements in replacement beef heifer planning budget for 2021, on a per heifer basis.

Feed description	Cost per unit	November to	May to	October to	Total pounds	Dollars ⁴
		May ¹	October ²	December ³		
		Pounds	Pounds	Pounds		
Mixed hay, per ton	100.00	1,250			1,250	62.50
Processed corn, per ton	200.00	240		90	330	33.00
Protein supplement, per ton	220.00	240		90	330	36.30
Salt and minerals, per ton	800.00	49	39	16	104	41.60
Total		1,779	39	196	2,014	173.40

¹ Beginning weight of 550 pounds and ending weight of 750 pounds after a 170 day feeding period.

² Beginning weight of 750 pounds and ending weight of 925 pounds after a 150 day feeding period.

³ Beginning weight of 925 pounds and ending weight of 1,000 pounds after a 60 day feeding period.

⁴ Totals may not sum due to rounding.

Table 4. Machinery assumptions used in replacement beef heifer planning budget for 2021.

Description	Cost per hour	Hours	Total dollars ¹	Dollars attributed to total heifer operation ²	Dollars per replacement heifer ³
Tractor; 105 MFWD	41.32	50	2,066.00	268.58	35.81
Truck	30.00	15	450.00	58.50	7.80
Livestock trailer	28.00	24	672.00	87.36	11.65
4-wheeler	10.00	180	1,800.00	234.00	31.20
Total			4,988.00	648.44	86.46

¹ Total machinery costs are based on combined cow-calf and replacement heifer operation.

² 13 percent of the total machinery costs for the beef herd are attributed to the heifer operation.

³ An average of 7.5 replacement heifers are assumed to be raised yearly in a 50 cow herd.

Abbreviations: MFWD = mechanical front-wheel drive tractor

Farmers can develop custom enterprise budget by using the Missouri Beef Enterprise Tool (<https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/Beef/Docs/MissouriBeefEnterprise.xlsx>). This spreadsheet tool allows users to make an enterprise budget for a cow-calf (spring or fall calving), heifer or backgrounding (drylot or pasture) operation.