

Beef Heifer Planning Budget

Using this planning budget, farmers raising beef heifers may estimate their costs and returns for 2023. Table 1 presents estimates for calves purchased and sold later as bred replacement heifers in Missouri. Assumptions were based on price forecasts as of September 2022. Detailed inputs, feed requirements and machinery investments are summarized in Tables 2, 3 and 4. The production practices used to develop these cost estimates are common in Missouri beef farms. Use the “Your estimate” column to plan your operation’s costs and returns for 2023.

Table 1. Missouri beef heifer planning budget for 2023.

	Per heifer sold ¹	Your estimate
Income		
Bred heifer sales (0.875 head)	1,618.75	
Cull heifer sales (0.05 head)	85.00	
Yearling heifer sales (0.075 head)	98.44	
Less death loss (1 percent of heifer sales)	18.02	
Total income	1,784.17	
Operating costs		
Purchased heifer calf	1,019.15	
Pasture	130.73	
Feed, mineral and stored forage	247.59	
Labor	89.60	
Veterinary, drugs and supplies	35.00	
Marketing costs	54.07	
Breeding costs	40.00	
Machinery and utilities	117.94	
Livestock facility repairs	8.50	
Miscellaneous	6.00	
Operating and calf interest	92.39	
Total operating costs	1,840.97	
Ownership costs		
Depreciation on livestock facilities	9.75	
Interest on livestock facilities	10.15	
Insurance and taxes on capital items	16.83	
Total ownership costs	36.73	
Total costs	1,877.69	
Income over operating costs	-56.80	
Income over total costs	-93.53	
Total cost per head per day (excluding calf price)	2.26	
Total cost per pound of gain	2.02	
Bred heifer breakeven price per head	1,958.68	

¹ Totals may not sum due to rounding.

Table 2. Input assumptions used in replacement beef heifer planning budget for 2023.

Selected input quantities	Per unit	Selected input prices	Dollars per unit
Heifer purchase weight, pounds	550	Heifer purchase price, per hundredweight	185.30
Yearling cull heifer sale weight, pounds	750	Yearling cull heifer sale price, per hundredweight	175.00
Heavy cull heifer sale weight, pounds	1,000	Heavy cull heifer sale price, per hundredweight	170.00
Bred heifer sale weight, pounds	1,000	Bred heifer sale price, per head	1,850.00
Labor, hours	5	Labor cost, per hour	17.92
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 2023, 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	150.00	1,250			1,250	93.75
Processed corn, per bushel	8.00	240		90	330	47.14
Protein supplement, per ton	300.00	240		90	330	49.50
Salt and minerals, per ton	1,100.00	49	39	16	104	57.20
Total		1,779	39	196	2,014	247.59

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 2023.

Description	Cost per hour	Hours	Total dollars ¹	Dollars attributed to total heifer operation ²	Dollars per replacement heifer ³
Tractor; 105 MFWD	57.25	50	2,862.50	372.13	49.62
Truck	40.00	15	600.00	78.00	10.40
Livestock trailer	30.00	24	720.00	93.60	12.48
4-wheeler	12.00	180	2,160.00	280.80	37.44
Total			6,342.50	824.53	109.94

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 also customize this budget to fit their own operations by using the [Missouri Beef Enterprise Tool](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/Beef/Docs/MissouriBeefEnterpriseTool) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/Beef/Docs/MissouriBeefEnterprise.xlsx). Download the spreadsheet tool to keep an electronic copy of your cost and return estimates for a cow-calf (spring or fall calving), heifer or backgrounding (drylot or pasture) operation in Missouri.