

On-Farm Beef Finishing Planning Budget

Beef cattle producers raising calves from birth to finish may use this planning budget to estimate their costs and returns in 2024. Table 1 presents estimates for the costs and returns associated with raising and finishing calves born in spring and fall calving herds, based on price forecasts as of September 2023. Detailed assumptions and feed requirements for systems starting with each calving season are summarized in Tables 2 through 5.

The production practices used to develop these estimates assume a 75-cow herd with purchased replacements, drylot backgrounding for spring calves and pasture backgrounding for fall calves, and grain-based finishing using self feeders. Finishing weight is roughly 1,400 pounds and animals are sold by live weight. Animals are 520 days of age at slaughter.

Table 1. Missouri on-farm beef finishing planning budget for 2024.

	Fall calving		Spring calving	
	Per animal sold ¹	Per pound	Per animal sold ¹	Per pound
Income				
Live cattle sales	2,580.60		2,566.20	
Culled breeding stock	203.46		232.71	
Total income	2,784.06	2.02	2,798.91	1.99
Operating costs				
Cow herd feed	803.28	0.58	769.85	0.55
Backgrounding feed	93.91	0.09	203.29	0.14
Finishing feed	472.97	0.34	472.97	0.34
Labor	223.48	0.16	247.04	0.18
Veterinary and drugs	57.01	0.04	60.03	0.04
Machinery and utilities	235.70	0.17	247.80	0.17
Livestock facility repairs	21.78	0.02	25.15	0.02
Cow and bull replacement	406.98	0.29	481.93	0.34
Marketing and professional fees	72.76	0.06	73.17	0.05
Miscellaneous	11.00	0.01	11.00	0.01
Operating interest	136.70	0.10	147.72	0.10
Total operating costs	2,535.58	1.84	2,739.94	1.94
Ownership costs				
Depreciation on facilities and equipment	11.05	0.01	14.58	0.01
Interest on capital assets	141.78	0.10	145.90	0.10
Insurance and taxes on capital assets	46.77	0.03	29.96	0.02
Total ownership costs	199.59	0.14	190.43	0.14
Total costs	2,735.17	1.98	2,930.37	2.08
Income over operating costs	248.48	0.18	58.97	0.04
Income over total costs	48.89	0.04	-131.46	-0.09

¹ Totals may not sum due to rounding.

Revised by
Drew Kientzy, Research Analyst, Agricultural Business and Policy Extension
Jennifer Lutes, Field Specialist, Agricultural Business and Policy Extension
Jake Hefley, Field Specialist, Agricultural Business and Policy Extension

Table 2. Assumptions in Missouri on-farm beef finishing planning budget: fall calving, pasture backgrounding, grain-finished system.

Description	Value	Description	Value
Live cattle price, dollars per hundredweight	187.00	Cows in herd	75
Cull cow price, dollars per hundredweight	112.50	Bulls in herd	3
Days to weaning	210	Weaning weight, pounds	595
Days backgrounded	120	Backgrounded weight, pounds	810
Days on feed	190	Finished weight, pounds	1,380
Replacement heifer value, dollars per head	2,500	Marketing fee, percent of sales	2.5
Replacement rate, percent of cow herd	13.0	Operating interest, percent APR	8.0
Labor, hours	11.5	Labor cost, dollars per hour	17.70

Table 3. Assumptions in Missouri on-farm beef finishing planning budget: spring calving, drylot backgrounding, grain-finished system.

Description	Value	Description	Value
Live cattle price, dollars per hundredweight	182.00	Cows in herd	75
Cull cow price, dollars per hundredweight	112.50	Bulls in herd	3
Days to weaning	210	Weaning weight, pounds	570
Days backgrounded	120	Backgrounded weight, pounds	840
Days on feed	190	Finished weight, pounds	1,410
Replacement heifer value, dollars per head	2,500	Marketing fee, percent of sales	2.5
Replacement rate, percent of cow herd	15.0	Operating interest, percent APR	8.0
Labor, hours	12.5	Labor cost, dollars per hour	17.70

Table 4. Feed requirements per animal sold in Missouri on-farm finishing planning budget in pounds: fall calving, pasture backgrounding, grain-finished system.

Feed description	Stage(s) used	Pricing unit	Cost per unit	Total pounds	Dollars ¹
Pasture	Cow-calf, background	AUM	18.00	12.5 AUM	217.52
Mixed hay	Cow-calf, finishing	tons	165.00	5,712	471.26
Shelled corn	Finishing	bushels	5.00	3,010	270.97
Dried distillers grain	Finishing	tons	240.00	1,011	121.32
Protein supplement	Cow-calf, background	tons	275.00	645	88.65
Feedlot supplement	Finishing	tons	500.00	118	29.39
Mineral	Cow-calf, background	tons	1,200.00	112	67.16
Limestone	Background	tons	200.00	18	1.82
Total				10,626	1,268.10

1. Totals may not sum due to rounding.

Table 5. Feed requirements per animal sold in Missouri on-farm finishing planning budget in pounds: spring calving, drylot backgrounding, grain-finished system.

Feed description	Stage(s) used	Pricing unit	Cost per unit	Total pounds	Dollars ¹
Pasture	Cow-calf	AUM	18.00	12.8 AUM	230.35
Mixed hay	All stages	tons	165.00	5,355	441.76
Shelled corn	Background, finishing	bushels	5.00	3,646	328.25
Dried distillers grain	Background, finishing	tons	240.00	1,637	196.49
Protein supplement	Cow-calf	tons	275.00	187	25.74
Feedlot supplement	Background, finishing	tons	500.00	186	46.52
Mineral	Cow-calf	tons	1,200.00	91	54.75
Total				11,102	1,323.86

1. Totals may not sum due to rounding.

Returns to on-farm finishing

Producers considering finishing beef strictly for direct-to-consumer freezer beef should understand how production scale affects their decisions. The finishing costs in this model reflect a small-scale feedlot that buys, mixes, and processes raw feed inputs into an incomplete ration fed through self feeders. The balance of the ration (roughage) is fed through free choice hay. This business model depends on the cost of gain being lower than the opportunity cost of selling the calves at weaning. For example, a 550-pound calf selling for \$250 per hundredweight is more profitable than a 1,400-pound steer selling for \$180 per hundredweight when the cost of gain is more than \$1.35 per pound.

Economies of scale are important in the cattle finishing business. Small operators may be better suited to buying feed pre-mixed rather than mixing it on the farm. Similarly, larger operations than the one described will have the scale to justify the equipment and facilities necessary to handle wet feed ingredients that can sometimes be produced or obtained at a lower cost. The costs and returns experienced on an individual operation can vary widely from what is described in this budget.

Other resources

Use the resources below to customize on-farm finishing budgets for your operation, explore marketing opportunities or see other beef cattle budgets from University of Missouri Extension.

- [Missouri Beef On-Farm Finishing Budget for Fall Calving \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/On-farm-finishing-budget-fall-calves.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/On-farm-finishing-budget-fall-calves.xlsx)
- [Missouri Beef On-Farm-Finishing Budget for Spring Calving \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/On-farm-finishing-budget-spring-calves.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/On-farm-finishing-budget-spring-calves.xlsx)
- [Evaluating Marketing Opportunities for Local Beef in Missouri](https://extension.missouri.edu/publications/g204) (extension.missouri.edu/publications/g204) showcases opportunities to market beef raised and finished on-farm directly to consumers as either freezer beef (wholes, halves, and quarters) or as retail cuts.
- Other beef cattle budgets and related information can be found on the [Beef Extension webpage](https://extension.missouri.edu/programs/beef-extension/publications) (extension.missouri.edu/programs/beef-extension/publications).