
Livestock Enterprise Budgets for Iowa — 2016

Ag Decision Maker

File B1-21



This publication contains estimates of production costs for common livestock enterprises in Iowa. Estimates are intended to reflect average or above-average levels of management using common types of technology. Input prices reflect expected average price levels during the year.

Data were drawn from farm record summaries, feed consumption research, and price projections and are intended to be used for planning purposes only. For individual farms, expected costs and input requirements based on past results should be substituted whenever possible.

Each budget contains estimates of the following types of costs:

Fixed Costs. Costs that will occur regardless of the level of production each year. They generally include such things as depreciation, interest, taxes, and insurance on facilities, breeding livestock, and livestock equipment and facilities. Depreciation is assumed to be 8 percent of the original value of facilities and equipment annually. Interest averages one-half of the original value of facilities over its lifetime, or 5 percent annually. Taxes and insurance add 1 percent for a total of 14 percent of the original investment annually for fixed costs.

Variable Costs. Costs that vary according to the level of production. Interest is calculated on feed and other variable costs for one-half of the production period.

FM 1815 Revised June 2016

IOWA STATE UNIVERSITY
Extension and Outreach

The budgets in this publication are based on the following price assumptions for inputs:

	Price	Units
Corn	\$3.60	bushel
Corn silage	33.00	ton
Alfalfa hay	135.00	ton
Alfalfa-brome hay	100.00	ton
Haylage	50.00	ton
Unimproved pasture	60.00	acre
Improved pasture	90.00	acre
Soybean meal (48%)	0.145	pound
Dried distiller grain	0.065	pound
Modified distiller grain	0.04	pound
Lamb supplement/mineral	0.16	pound
Sow & pig vitamin/mineral	0.50	pound
Hog vitamin/mineral	0.32	pound
Beef supplement/mineral	0.16	pound
Dairy supplement	0.12	pound
Dairy salt and mineral	0.16	pound
Dairy commodities	0.15	pound
Dairy fat	0.30	pound
Feeder pig (50 lbs)	70.00	head
Yearling steer (700-800 lbs)	1.50	pound
Steer calf (500-600 lbs)	1.85	pound
Heifer calf (400-500 lbs)	1.80	pound
Feeder lamb (70 lbs)	1.85	pound
Operating capital	9.00%	year

... and justice for all

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and July 30, 1914, in cooperation with the U.S. Department of Agriculture. Cathann A. Kress, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

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Livestock Enterprise Summary

Enterprise	Unit	Labor Hours	Bushels of Corn	Tons of Modified Distiller Grain	Tons of Dried Distiller Grain	Tons of Hay ^{a/}	Tons of Silage
Beef							
Yearling steers, hay	head	2	50	0.95	0	0.25	0
Yearling steers, silage	head	2	41	0.95	0	0	1.10
Steer calves, hay	head	3	52	1.05	0	0.40	0
Steer calves, silage	head	3	38	1.05	0	0	1.70
Yearling heifers, hay	head	2	50	0.95	0	0.25	0
Yearling heifers, silage	head	2	41	0.95	0	0	1.10
Backgrounding steer calves, winter	head	1.25	27	0	0	0.50	0
Backgrounding steer calves, summer	head	1	0	0	0	0	0
Cow-calf, calves sold	cow unit	8	4	0	0	2.10	0
Cow-calf, calves fed	cow unit	10	56	1.05	0	2.50	0

^{a/} Does not include pasture.

Finishing Yearling Steers — One Head

	<u>Corn and Hay Ration</u>			<u>Corn and Silage Ration</u>			<u>Your Farm</u>
Income	Quantity			Quantity			
Steer sales (1,250 lbs x \$_____/lb)	1,250	lbs	\$ _____	1,250	lbs	\$ _____	\$ _____
Variable Costs							
Yearling feeder cost @ \$1.50 per lb	750	lbs	\$1,125.00	750	lbs	\$1,125.00	\$ _____
Interest @ 9%	5.5	months	46.41	5.5	months	46.41	_____
Feed Costs							
Corn @ \$3.60 per bushel	50	bu	\$180.00	41	bu	\$147.60	\$ _____
Fair quality hay @ \$100.00 per ton	0.25	tons	25.00				_____
Modified distiller grain @ \$80.00 per ton	0.95	tons	76.00	0.95	tons	76.00	_____
Supplement & minerals @ \$0.16 per lb	100	lbs	16.00	100	lbs	16.00	_____
Corn silage @ \$33.00 per ton				1.10	tons	36.30	_____
Total Feed Costs			\$297.00			\$275.90	\$ _____
Veterinary and health			\$8.00			\$8.00	\$ _____
Machinery and equipment			7.00			7.00	_____
Marketing, transport, miscellaneous			16.00			16.00	_____
Interest on variable costs @ 9%	2.75	months	6.77	2.75	months	6.33	_____
Labor @ \$14.00 per hour	2	hours	28.00	2	hours	28.00	_____
Death loss ^{a/}			13.53			13.42	_____
Total Variable Costs			\$1,547.70			\$1,526.06	\$ _____
Income over Variable Costs			\$ _____			\$ _____	\$ _____
Fixed Costs							
Machinery, equipment, housing			\$14.00			\$14.00	\$ _____
Total of All Costs			\$1,561.70			\$1,540.06	\$ _____
Income over All Costs			\$ _____			\$ _____	\$ _____
Breakeven selling price for variable costs per lb			\$1.24			\$1.22	\$ _____
Breakeven selling price for all costs per lb			\$1.25			\$1.23	\$ _____

^{a/} Death loss cost is assumed to be 1% of feeder purchase costs and 0.5% of all other variable costs.

Note: One pound of modified distiller grain contains the energy of 0.5 pound of corn and the protein of 0.36 pound of soybean meal.

Finishing Steer Calves — One Head

	<u>Corn and Hay Ration</u>		<u>Corn and Silage Ration</u>		<u>Your Farm</u>
Income	Quantity		Quantity		
Fed steer sale (1,150 lbs x \$ _____/lb)	1,150 lbs	\$ _____	1,150 lbs	\$ _____	\$ _____
Variable Costs					
Calf feeder cost @ \$1.85 per lb	550 lbs	\$1,017.50	550 lbs	\$1,017.50	\$ _____
Interest @ 9%	7 months	\$53.42	7 months	\$53.42	_____
Feed Costs					
Corn @ \$3.60 per bushel	52 bu	\$187.20	38 bu	\$136.80	\$ _____
Fair quality hay @ \$100.00 per ton	0.4 tons	40.00			_____
Modified distiller grain @ \$80.00 per ton	1.05 tons	84.00	1.05 tons	84.00	_____
Supplement & minerals @ \$0.16 per lb	130 lbs	20.80	130 lbs	20.80	_____
Corn silage @ \$33.00 per ton			1.70 tons	56.10	_____
Total Feed Costs		\$332.00		\$297.70	\$ _____
Veterinary and health		\$10.00		\$10.00	\$ _____
Machinery and equipment		11.00		11.00	_____
Marketing and miscellaneous		14.00		14.00	_____
Interest on variable costs @ 9%	3.5 months	9.63	3.5 months	8.73	_____
Labor @ \$14.00 per hour	3 hours	42.00	3 hours	42.00	_____
Death loss ^{a/}		25.60		25.25	_____
Total Variable Costs		\$1,515.16		\$1,479.60	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, equipment, housing		\$21.00		\$21.00	\$ _____
Total of All Costs		\$1,536.16		\$1,500.60	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per lb		\$1.32		\$1.29	\$ _____
Breakeven selling price for all costs per lb		\$1.34		\$1.30	\$ _____

^{a/} Death loss cost is assumed to be 2% of feeder purchase costs and 1% of all other variable costs.

Note: One pound of modified distiller grain contains the energy of 0.5 pound of corn and the protein of 0.36 pound of soybean meal.

Finishing Yearling Heifers — One Head

	<u>Corn and Hay Ration</u>			<u>Corn and Silage Ration</u>			<u>Your Farm</u>
Income	Quantity			Quantity			
Fed heifer sale (1,100 lbs x \$ _____/lb)	1,100	lbs	\$ _____	1,100	lbs	\$ _____	\$ _____
Variable Costs							
Yearling feeder cost @ \$1.50 per lb	700	lbs	\$1,050.00	700	lbs	\$1,050.00	\$ _____
Interest @ 9%	155	days	40.13	155	days	40.13	_____
Feed Costs							
Corn @ \$3.60 per bushel	50	bu	\$180.00	41	bu	\$147.60	\$ _____
Fair quality hay @ \$100.00 per ton	0.25	tons	25.00				_____
Modified distiller grain @ \$80.00 per ton	0.95	tons	76.00	0.95	tons	76.00	_____
Corn silage @ \$33.00 per ton				1.1	tons	36.30	_____
Supplement & minerals @ \$0.16 per lb	100	lbs	16.00	100	lbs	16.00	_____
Total Feed Costs			\$297.00			\$275.90	\$ _____
Veterinary and health			\$8.00			\$8.00	\$ _____
Machinery and equipment			7.00			7.00	_____
Marketing, transport, miscellaneous			16.00			16.00	_____
Interest on variable costs @ 9%	2.75	months	6.77	2.75	months	6.33	_____
Labor @ \$14.00 per hour	2	hours	28.00	2	hours	28.00	_____
Death loss ^{a/}			12.72			12.61	_____
Total Variable Costs			\$1,465.61			\$1,443.97	\$ _____
Income over Variable Costs			\$ _____			\$ _____	\$ _____
Fixed Costs							
Feedlot facilities & equipment			\$16.00			\$16.00	\$ _____
Total of All Costs			\$1,481.61			\$1,459.97	\$ _____
Income over All Costs			\$ _____			\$ _____	\$ _____
Breakeven selling price for variable costs per lb			\$1.33			\$1.31	\$ _____
Breakeven selling price for all costs per lb			\$1.35			\$1.33	\$ _____

^{a/} Death loss cost is assumed to be 1% of feeder purchase costs and 0.5% of all other variable costs.

Note: One pound of modified distiller grain contains the energy of 0.5 pound of corn and the protein of 0.36 pound of soybean meal.

Backgrounding Steer Calves — One Head

	Winter Corn and Hay Ration		Summer Improved Pasture		Your Farm
Income	Quantity		Quantity		
Feeder cattle sales (\$_____/lb)	750 lbs	\$ _____	750 lbs	\$ _____	\$ _____
Variable Costs					
Calf purchase @ \$1.85 per lb	450 lbs	\$832.50	525 lbs	\$971.25	\$ _____
Interest @ 9% annual	5 months	31.22	5 months	36.42	_____
Feed Costs					
Corn @ \$3.60 per bushel	27 bu	\$97.20			\$ _____
Alfalfa - brome hay @ \$100.00 per ton	0.5 tons	50.00			_____
Supplement & minerals @ \$0.16 per lb	80 lbs	12.80	35 lbs	\$5.60	_____
Improved pasture @ \$90.00 per acre			0.7 acre	63.00	_____
Pasture fert, misc costs @ \$20.00 per acre			0.7 acre	14.00	_____
Total Feed Costs		\$160.00		\$82.60	\$ _____
Veterinary and health		\$5.00		\$5.00	\$ _____
Machinery and equipment		4.50		4.25	_____
Marketing, transport, miscellaneous		12.00		12.00	_____
Interest on variable costs @ 9%	2.5 months	3.40	2.5 months	1.95	_____
Labor @ \$14.00 per hour	1.25 hours	17.50	1 hour	14.00	_____
Death loss ^{a/}		9.65		10.68	_____
Total Variable Costs		\$1,075.77		\$1,138.14	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, equipment, housing		\$14.00		\$2.10	\$ _____
Total of All Costs		\$1,089.77		\$1,140.24	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per lb		\$1.43		\$1.52	\$ _____
Breakeven selling price for all costs per lb		\$1.45		\$1.52	\$ _____

^{a/} Death loss cost is assumed to be 1% of feeder purchase costs and 0.5% of all other variable costs.

Beef Cow-Calf — One Cow Unit ^{a/}

	Hay and Pasture Calves Sold		Hay and Pasture Calves Fed		Your Farm
Income	Quantity		Quantity		
Heifer calf (0.26 head x \$_____/lb)	500 lbs	\$_____	1,000 lbs	\$_____	\$_____
Steer calf (0.46 head x \$_____/lb)	550 lbs	\$_____	1,100 lbs	\$_____	\$_____
Cull cow (0.18 head x \$_____/lb)	1,350 lbs	\$_____	1,150 lbs	\$_____	\$_____
Gross Income		\$_____		\$_____	\$_____
Variable Costs					
Feed Costs					
Pasture @ \$60.00 per acre	2.5 acres	\$150.00	2.5 acres	\$150.00	\$_____
Pasture fert, misc @ \$20.00 per acre	2.5 acres	50.00	2.5 acres	50.00	_____
Corn @ \$3.60 per bushel	4 bu	14.40	56 bu	201.60	_____
Modified distiller grain @ \$80.00 per ton			1.05 tons	84.00	_____
Salt & mineral @ \$0.09 per lb	60 lbs	5.40	60 lbs	5.40	_____
Supplement & minerals @ \$0.16 per lb			128 lbs	20.48	_____
Alfalfa - brome hay @ \$100.00 per ton	2.1 tons	210.00	2.5 tons	250.00	_____
Corn stalks @ \$3.00 per acre	4 acres	12.00	4 acres	12.00	_____
Total Feed Costs		\$441.80		\$773.48	\$_____
Veterinary and health		\$25.00		\$35.00	\$_____
Machinery, equipment, fuel and repairs		15.00		26.00	_____
Marketing and miscellaneous		20.00		25.00	_____
Interest on variable costs @ 9%	6 months	22.58	9 months	58.01	_____
Labor @ \$14.00 per hour	8 hours	112.00	10 hours	140.00	_____
Total Variable Costs		\$636.38		\$1,057.49	\$_____
Income over Variable Costs		\$_____		\$_____	\$_____
Fixed Costs					
Machinery, equipment, fences		\$65.10		\$75.10	\$_____
Interest, insurance on herd @ 10%		108.20		108.20	_____
Bull depreciation/replacement		12.00		12.00	_____
Total Fixed Costs		\$185.30		\$195.30	\$_____
Total of All Costs		\$821.68		\$1,252.79	\$_____
Income over All Costs		\$_____		\$_____	\$_____
Breakeven selling price for variable costs per lb ^{b/}		\$1.42		\$1.26	\$_____
Breakeven selling price for all costs per lb ^{b/}		\$1.90		\$1.51	\$_____

^{a/} A cow-calf unit is 1 cow, 0.2 bred heifer, 0.9 calf, and 0.04 bull. Calf crop weaned of 92% of cows in herd, 20% replacement and 2% death rate on replacement heifers and cows are assumed.

^{b/} Assumes yearly cull cow sales of \$93.15.

Note: One pound of modified distiller grain contains the energy of 0.5 pound of corn and the protein of 0.36 pound of soybean meal.

Beef Cow-Calf Investment

1. Breeding herd investment per cow unit

Beef cow	\$850.00
Replacement heifer (\$850 x 0.20 head per cow unit)	\$160.00
Bull (\$1,800 divided by 25 cows)	<u>\$72.00</u>
Per cow unit	\$1,082.00

2. Bull replacement cost per cow unit

Bull cost, \$1,800	minus cull value, \$900	divided by cows, 25 cows	divided by number of years 3 years	\$12.00
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3. Facilities and machinery investment (50-cow herd) (replacement cost)

Utility tractor (\$18,000 x 25% cow use)	\$4,500
Hay moving equipment	\$2,000
Handling facilities	\$3,000
Fences (\$94.00 per acre x 125 acres)	\$11,750
Feeders and waterers	<u>\$2,000</u>
Total	\$23,250
Total investment per cow (50-cow herd)	\$465
Depreciation, interest, taxes, insurance @ 14% annually	\$65
