
Livestock Enterprise Budgets for Iowa – 2019

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 eight percent of the original value of facilities and equipment annually. Interest averages one-half of the original value of facilities over its lifetime, or five percent annually. Taxes and insurance add one 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.

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Livestock Budget Price Assumptions

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

	Price	Units
Corn	\$3.40	bushel
Corn silage	32.00	ton
Alfalfa hay	140.00	ton
Alfalfa-brome hay	120.00	ton
Haylage	50.00	ton
Unimproved pasture	50.00	acre
Improved pasture	75.00	acre
Soybean meal (48%)	0.14	pound
Dried distiller grain	0.07	pound
Modified distiller grain	0.03	pound
Lamb supplement/mineral	0.16	pound
Sow & pig vitamin/mineral	0.50	pound
Hog vitamin/mineral	0.32	pound
Beef supplement/mineral	0.23	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 pounds)	70.00	head
Yearling steer (700-800 pounds)	1.55	pound
Steer calf (500-600 pounds)	1.80	pound
Heifer calf (400-500 pounds)	1.60	pound
Feeder lamb (70 pounds)	2.00	pound
Operating capital	6.00%	year

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Livestock Enterprise Summary

Page	Enterprise	Unit	Labor Hours	Bushels of Corn	Tons of Modified Distiller Grain	Tons of Dried Distiller Grain	Tons of Hay ^{a/}	Tons of Silage
Swine								
6	Farrow-finish, pasture	litter	12	97	0	267	0	0
6	Farrow-finish, total confinement	litter	6	105	0	288	0	0
7	Finishing feeder pigs	head	0.2	9.0	0	32	0	0
8	Weaned pig prod., total confinement	litter	3	17.1	0	0	0	0
9	Finishing weaned pigs, confinement	head	0.4	9.8	0	32	0	0
Beef								
11	Yearling steers, hay	head	2.5	60	1.14	0	0.30	0
11	Yearling steers, silage	head	2.5	49.25	1.14	0	0	1.32
12	Steer calves, hay	head	4	69	1.4	0	0.53	0
12	Steer calves, silage	head	3.5	50	1.4	0	0	2.26
13	Yearling heifers, hay	head	2	80	1.5	0	0.4	0
13	Yearling heifers, silage	head	2	66	1.5	0	0	1.90
14	Backgrounding steer calves, winter	head	1.25	27	0	0	0.50	0
14	Backgrounding steer calves, summer	head	1	0	0	0	0	0
15	Cow-calf, calves sold	cow unit	8	4	0	0	2.10	0
15	Cow-calf, calves fed	cow unit	10	56	1.05	0	2.50	0
Sheep								
17	Ewe flock, early lambs	ewe unit	5	10	0	0	0.4	0
17	Ewe flock, late lambs	ewe unit	3	8	0	0	0.3	0
19	Feeder lamb	head	1	5.2	0	0	0.02	0
Dairy								
21	20,000 pounds milk/cow	cow unit	70	104	0	0	6.1	8.0
21	24,000 pounds milk/cow	cow unit	70	113	0	0	6.0	8.0

^{a/} Does not include pasture.

Swine Production Investment

1. Breeding herd investment per litter

	<u>Pasture</u>	<u>Confinement</u>
Sow in herd	\$155	\$155
Replacement gilts (\$155 each)	0.50 head <u>78</u>	0.28 head <u>43</u>
Total investment per sow	\$233	\$198
Total investment per litter (1.9 and 2.2 litters per year per sow)	\$122	\$90

2. Cost estimates (Building and equipment replacement cost)

<u>Use</u>	<u>Pasture</u>		<u>Confinement</u> ^{a/}	
	<u>Structure Type</u>	<u>Cost per space</u>	<u>Structure type</u>	<u>Cost per space</u>
Farrowing and Gestation	Pasture A-frame huts Portable on pasture	\$300 \$150	Enclosed confinement with crates	\$1,000
Nursery	Barn with raised decks	\$50	Raised deck with pit	\$112
Finishing	Drylot or pasture	\$30	Double curtain	\$200

3. Facilities, equipment, and machinery investment for farrow to finish (\$ per litter)

	<u>Pasture</u>	<u>Confinement</u> ^{a/}
Farrowing	\$300 / 2 lit/year/hut = \$150	
Gestation	\$150 / 1.9 lit/sow = 79	\$1,000 / 2.2 lit/sow = \$455
Nursery	\$50 / 2 lit/year x 7.6 = 190	\$112 / 6 lit/year x 8.8 = 164
Finishing	\$30 / 2 lit/year x 7.1 = 107	\$200 / 2.5 lit/year x 8.5 = 680
Feed storage	50	
Feed handling	25	
Manure handling	15	
Tractor	<u>(\$18,000 x 25%)</u> 50 litters/year = <u>90</u>	
Total Investment	\$706	\$1,299
Interest, depreciation, taxes, insurance	14% annually \$99	10% annually \$130

^{a/} Farrowing and gestation are combined for confinement operations.

Swine Production Investment (continued)

4. Facilities, equipment, and machinery investment for feeder pigs

		<u>Feeder Pig Production</u>			Per litter	Per head
Farrowing & Gestation			Annually			
Building	\$545 divided by 2.2 litters per year =	\$248	8%	\$20	\$2.24	
Equipment	\$455 divided by 2.2 litters per year =	\$207	14%	\$29	\$3.29	
Nursery						
Building	\$73 divided by 6 pigs per year =	\$12	8%	\$8	\$0.96	
Equipment	\$39 divided by 6 pigs per year =	\$7	14%	\$8	\$0.91	
Total				\$65	\$7.40	
		<u>Feeder Pig Finishing</u>				
Finishing			Annually	Per litter	Per head	
Building	\$140 divided by 2.5 head per year =	\$56	8%	\$38	\$4.45	
Equipment	\$60 divided by 2.5 head per year =	\$24	14%	\$28	\$3.30	
Total				\$66	\$7.75	

5. Estimated feed requirements for farrow-to-finish enterprise, including breeding herd

<u>Pigs Per Sow Per Year</u>	<u>Bushels of Corn Per Litter</u>	<u>Pounds of Soybean meal Per Litter</u>	<u>Pounds of DDG Per Litter</u>
14	159	1,814	204
16	179	2,052	233
18	199	2,290	262
20	219	2,528	291

6. Breakeven selling price for confinement farrow-to-finish if corn price is:

<u>Corn (\$ per bushel)</u>	<u>Soybean Meal (\$ per pound)</u>	<u>DDG (\$ per pound)</u>	<u>Total Costs \$/cwt</u>	<u>Variable Costs \$/cwt</u>
\$3.20	\$0.14	\$0.04	\$49.34	\$42.52
3.30	0.15	0.05	50.41	43.58
3.40	0.16	0.06	51.47	44.65
3.50	0.17	0.07	52.54	45.71
3.60	0.18	0.08	53.60	46.77
3.70	0.19	0.09	54.66	47.84
3.80	0.20	0.10	55.73	48.90

Swine Production – One Litter

	Farrow-to-Finish Pasture		Farrow-to-Finish Total Confinement		Your Farm
Income ^{a/}	Quantity		Quantity		
Market hogs (260 pounds x \$_____/pound)	7.3 head	\$ _____	8.50 head	\$ _____	\$ _____
Cull sows (400 pounds x \$_____/pound)	0.5 head	\$ _____	0.25 head	\$ _____	\$ _____
Gross Income		\$ _____		\$ _____	\$ _____
Variable Costs					
Feed Costs					
Corn @ \$3.40 per bushel	97 bushels	\$329.80	105 bushels	\$357.00	\$ _____
Soybean meal @ \$0.14 per pound	943 pounds	132.02	1,013 pounds	141.82	_____
Dried distiller grain @ \$0.07 per pound	267 pounds	18.69	288 pounds	20.16	_____
Vitamin & minerals @ \$0.50 per pound	35 pounds	17.50	36 pounds	18.00	_____
Vitamin & minerals @ \$0.32 per pound	95 pounds	30.40	110 pounds	35.20	_____
Pasture @ \$50.00 per acre	0.20 acre	10.00			_____
Feed additives		22.00		25.00	_____
Total Feed Costs		\$560.41		\$597.18	\$ _____
Veterinary and health		\$34.00		\$25.00	\$ _____
Fuel, repairs, utilities		35.00		50.00	_____
Bedding, marketing, miscellaneous		45.00		30.00	_____
Interest on variable costs @ 6%	5 months	16.86	5 months	17.55	_____
Labor @ \$14.00 per hour	12 hours	168.00	6 hours	84.00	_____
Total Variable Costs		\$859.27		\$803.73	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, facilities		\$99.00		\$130.00	\$ _____
Breeding costs, boar/semen		13.00		13.00	_____
Replacement gilts @ \$155 head	0.50 head	77.50	0.28 head	43.40	_____
Interest, insurance on breeding herd @ 10%		12.24		9.02	_____
Total Fixed Costs		\$201.74		\$195.42	\$ _____
Total of All Costs		\$1,061.01		\$999.15	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per cwt ^{b/}		\$41.58		\$34.78	\$ _____
Breakeven selling price for all costs per cwt ^{b/}		\$52.21		\$43.63	\$ _____

^{a/} For pasture, a weaning average of 8.3 pigs is assumed, minus 0.40 death loss and 0.60 for replacement. For confinement, a weaning average of 9 pigs is assumed, minus 0.5 death loss. Sow death loss is 5 percent.

^{b/} Cull sow income of \$70 per litter is assumed for pasture (sows sold after 2 litters) and \$35 per litter for total confinement (sows sold after 4 litters).

Finishing Feeder Pigs — One Pig

Income	Quantity		Your Farm
Market hog (260 lbs x \$_____/pound)	1 head	\$ _____	\$ _____
Variable Costs			
Feeder pig (50 pounds) @ \$70.00 per head	1 head	\$70.00	\$ _____
Interest @ 6%	5 months	1.75	_____
Feed Costs			
Corn @ \$3.40 per bushel	9 bushels	\$30.60	\$ _____
Soybean meal @ \$0.14 per pound	82 pounds	11.48	_____
Dried distiller grain @ \$0.07 per pound ^{a/}	32 pounds	2.24	_____
Vitamin & minerals @ \$0.50 per pound	14.4 pounds	7.20	_____
Feed processing & delivery @ \$10 per ton	0.3 tons	3.00	_____
Feed additives		3.00	_____
Total Feed Costs		\$57.52	\$ _____
Veterinary and medical		\$4.00	\$ _____
Fuel, repairs, utilities		3.50	_____
Marketing, miscellaneous		4.00	_____
Manure application cost @ \$0.01 per gallon	190 gallon	1.90	_____
Interest on variable costs @ 6%	2.5 months	0.86	_____
Death loss	0.02 head	1.40	_____
Labor @ \$14.00 per hour	0.2 hours	2.80	_____
Total Variable Costs		\$147.73	\$ _____
Income over Variable Costs		\$ _____	\$ _____
Fixed Costs			
Machinery, facilities		\$8.63	\$ _____
Total of All Costs		\$156.36	\$ _____
Income over All Costs		\$ _____	\$ _____
Breakeven selling price for variable costs per cwt		\$56.82	\$ _____
Breakeven selling price for all costs per cwt		\$60.14	\$ _____

^{a/} Dried distiller grain substitutes for 0.6 bushels of corn and 5 pounds of soybean meal.

Swine Production — One Litter Producing Weaned 12 Pound Pigs, Total Confinement

Income ^{a/}	Quantity		Your Farm
Weaned pigs (\$_____/head)	9 head	\$	\$
Cull sows (\$_____/head)	0.25 head/litter	\$	\$
Gross Income		\$	\$
Variable Costs			
Feed Costs			
Corn @ \$3.40 per bushel	17.1 bushels	\$58.14	\$
Soybean meal @ \$0.14 per pound	149 pounds	20.86	_____
Vitamin & minerals @ \$0.50 per pound	23 pounds	11.50	_____
Feed processing & delivery @ \$10 per ton	0.6 tons	6.00	_____
Total Feed Costs		\$96.50	\$
Veterinary and medical		\$17.00	\$
Fuel, repairs, utilities		7.50	_____
Marketing, miscellaneous		10.00	_____
Manure application cost @ \$0.01 per gallon	300 gallons	3.00	_____
Interest on variable costs @ 6%	3 months	2.01	_____
Labor @ \$14.00 per hour	3 hours	42.00	_____
Total Variable Costs		\$178.01	\$
Income over Variable Costs		\$	\$
Fixed Costs			
Facilities & equipment		\$66.15	\$
Breeding costs, boar/semen		13.00	_____
Replacement gilts @ \$155 head	0.28 head	43.40	_____
Interest, insurance on sows @ 10%	5 months	6.46	_____
Total Fixed Costs		\$129.01	\$
Total of All Costs		\$307.02	\$
Income over All Costs		\$	\$
Breakeven selling price for variable costs per head ^{b/}		\$15.06	\$
Breakeven selling price for all costs per head ^{b/}		\$29.39	\$

^{a/} Assuming an average of 9.0 weaned pigs per litter and all replacement gilts are purchased.

^{b/} Cull sow income of \$37.19 per litter is assumed (sows sold after 4 litters).

Swine Production — One Pig Finishing 12 Pound Weaned Pig, Confinement

Income			Your Farm
Market hog (260 pounds x \$_____/pound)		\$ _____	\$ _____
Variable Costs	Quantity		
Weaned feeder pig (12 pounds)		\$45.00	\$ _____
Interest @ 6%	150 days	1.11	_____
Feed Costs			
Corn @ \$3.40 per bushel	9.8 bushels	\$33.32	\$ _____
Soybean meal @ \$0.14 per pound	119 pounds	16.66	_____
Dried distiller grain @ \$0.07 per pound ^{a/}	32 pounds	2.24	_____
Vitamin & minerals @ \$0.50 per pound	14.4 pounds	7.20	_____
Pre-nursery diet		3.00	_____
Feed additives		3.00	_____
Feed processing and delivery @ \$10 per ton		3.60	_____
Total Feed Costs		\$69.02	\$ _____
Veterinary and medical		\$5.00	\$ _____
Fuel, repairs, utilities		4.20	_____
Marketing, miscellaneous		4.00	_____
Manure application cost		2.20	_____
Interest on variable costs @ 6%	3 months	0.63	_____
Labor @ \$14.00 per hour	0.40 hours	5.60	_____
Death loss ^{b/}		4.57	_____
Total Variable Costs		\$141.34	\$ _____
Income over Variable Costs		\$ _____	\$ _____
Fixed Costs			
Facilities & equipment		\$11.28	\$ _____
Total of All Costs		\$152.62	\$ _____
Income over All Costs		\$ _____	\$ _____
Breakeven selling price for variable costs per cwt		\$54.36	\$ _____
Breakeven selling price for all costs per cwt		\$58.70	\$ _____

^{a/} Dried distiller grain substitutes for 0.6 bushels of corn and 5 pounds of soybean meal.

^{b/} Death loss cost is assumed to be 5% of weaned feeder purchase costs and 2.5% of all other variable costs.

Feed Requirements and Conversion Rates to Carry Hogs from Various Purchased Weights to Various Market Weights^{a/}

Purchase wt. (lbs)	Feed requirements	Unit	240 lbs	250 lbs	260 lbs	270 lbs	280 lbs	290 lbs	300 lbs
10	Corn	bushel	9.0	9.6	10.1	10.7	11.3	11.8	12.4
		pounds	506	536	567	599	630	661	697
	Soybean meal	pounds	113	116	119	122	125	129	133
	DDG	pounds	28	30	32	34	36	38	40
	Total	pounds	647	682	718	755	791	828	870
	Conversion	pounds/cwt	281	284	287	290	293	296	300
20	Corn	bushel	8.7	9.2	9.8	10.3	10.9	11.4	12.1
		pounds	487	517	547	578	609	641	676
	Soybean meal	pounds	105	109	113	116	120	124	128
	DDG	pounds	28	30	32	34	36	38	40
	Total	pounds	620	656	692	728	765	803	844
	Conversion	pounds/cwt	282	285	288	291	294	297	301
30	Corn	bushel	8.4	8.9	9.4	10.0	10.6	11.1	11.7
		pounds	470	500	528	560	591	621	657
	Soybean meal	pounds	98	102	106	110	114	118	122
	DDG	pounds	28	30	32	34	36	38	40
	Total	pounds	596	632	666	704	741	777	819
	Conversion	pounds/cwt	284	287	290	293	296	299	303
40	Corn	bushel	8.1	8.6	9.1	9.7	10.2	10.8	11.4
		pounds	451	481	511	541	572	602	638
	Soybean meal	pounds	92	96	100	104	108	112	116
	DDG	pounds	28	30	32	34	36	38	40
	Total	pounds	571	607	643	679	716	752	794
	Conversion	pounds/cwt	286	289	292	295	298	301	305
50	Corn	bushel	7.9	8.5	9.0	9.6	10.1	10.7	11.3
		pounds	444	474	503	535	565	597	631
	Soybean meal	pounds	75	78	82	85	89	93	97
	DDG	pounds	28	30	32	34	35	37	39
	Total	pounds	547	582	617	654	689	727	767
	Conversion	pounds/cwt	288	291	294	297	300	303	307
60	Corn	bushel	7.6	8.1	8.6	9.2	9.7	10.3	10.9
		pounds	427	455	484	515	545	577	611
	Soybean meal	pounds	69	73	77	81	85	88	92
	DDG	pounds	26	28	30	32	34	36	38
	Total	pounds	522	556	591	628	664	701	741
	Conversion	pounds/cwt	290	293	296	299	302	305	309
70	Corn	bushel	7.3	7.8	8.3	8.8	9.4	9.9	10.6
		pounds	408	436	465	495	526	557	591
	Soybean meal	pounds	64	68	72	76	80	84	88
	DDG	pounds	25	27	29	31	33	34	36
	Total	pounds	497	531	566	602	639	675	715
	Conversion	pounds/cwt	292	295	298	301	304	307	311

^{a/}Feed efficiency varies considerably depending on environmental temperatures, disease level, ration fed, quality of management, and death loss. The feed requirements here are for hogs with good performance under excellent management. These figures assume zero mortality; correction for mortality is made when you complete the worksheet on pages 7 or 9.

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 (1,350 lbs x \$_____/pound)	1,350	pounds \$_____	1,350	pounds \$_____	\$_____
Variable Costs					
Yearling feeder cost @ \$1.55 per pound	750	pounds \$1,162.50	750	pounds \$1,162.50	\$_____
Interest @ 6%	6.5	months 37.78	6.5	months 37.78	_____
Feed Costs					
Corn @ \$3.40 per bushel	60	bushels \$204.00	49.25	bushels \$167.45	\$_____
Fair quality hay @ \$120.00 per ton	0.30	tons 36.00			_____
Modified distiller grain @ \$60.00 per ton	1.14	tons 68.40	1.14	tons 68.40	_____
Supplement & minerals @ \$0.23 per pound	95	pounds 21.85	95	pounds 21.85	_____
Corn silage @ \$32.00 per ton			1.32	tons 42.24	_____
Total Feed Costs		\$330.25		\$299.94	\$_____
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 @ 6%	2.75	months 4.97	2.75	months 4.55	_____
Labor @ \$14.00 per hour	2.5	hours 35.00	2.5	hours 35.00	_____
Death loss ^{a/}		14.01		13.86	_____
Total Variable Costs		\$1,615.51		\$1,584.63	\$_____
Income over Variable Costs		\$_____		\$_____	\$_____
Fixed Costs					
Machinery, equipment, housing		\$14.00		\$14.00	\$_____
Total of All Costs		\$1,629.51		\$1,598.63	\$_____
Income over All Costs		\$_____		\$_____	\$_____
Breakeven selling price for variable costs per pound		\$1.20		\$1.17	\$_____
Breakeven selling price for all costs per pound		\$1.21		\$1.18	\$_____

^{a/} Death loss cost is assumed to be 1 percent of feeder purchase costs and 0.5 percent 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 (1,350 lbs x \$_____/pound)	1,350 lbs	\$ _____	1,350 pounds	\$ _____	\$ _____
Variable Costs					
Calf feeder cost @ \$1.80 per pound	550 pounds	\$990.00	550 pounds	\$990.00	\$ _____
Interest @ 6%	9 months	44.55	9 months	44.55	_____
Feed Costs					
Corn @ \$3.40 per bushel	69 bushels	\$234.60	50 bushels	\$170.00	\$ _____
Fair quality hay @ \$120.00 per ton	0.53 tons	63.60			_____
Modified distiller grain @ \$60.00 per ton	1.40 tons	84.00	1.40 tons	84.00	_____
Supplement & minerals @ \$0.23 per pound	135 pounds	31.05	135 pounds	31.05	_____
Corn silage @ \$32.00 per ton			2.26 tons	72.32	_____
Total Feed Costs		\$413.25		\$357.37	\$ _____
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 @ 6%	3.5 months	7.84	3.5 months	6.87	_____
Labor @ \$14.00 per hour	4 hours	56.00	3.5 hours	49.00	_____
Death loss ^{af}		25.81		25.17	_____
Total Variable Costs		\$1,572.46		\$1,507.96	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, equipment, housing		\$21.00		\$21.00	\$ _____
Total of All Costs		\$1,593.46		\$1,528.96	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per pound		\$1.16		\$1.12	\$ _____
Breakeven selling price for all costs per pound		\$1.18		\$1.13	\$ _____

^{af} Death loss cost is assumed to be 2 percent of feeder purchase costs and 1 percent 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 (1,350 lbs x \$_____/pound)	1,350 pounds	\$ _____	1,350 pounds	\$ _____	\$ _____
Variable Costs					
Yearling feeder cost @ \$1.55 per pound	700 pounds	\$1,085.00	700 pounds	\$1,085.00	\$ _____
Interest @ 6%	270 days	48.16	270 days	48.16	_____
Feed Costs					
Corn @ \$3.40 per bushel	80 bushels	\$272.00	66 bushels	\$224.40	\$ _____
Fair quality hay @ \$120.00 per ton	0.40 tons	48.00			_____
Modified distiller grain @ \$60.00 per ton	1.5 tons	90.00	1.5 tons	90.00	_____
Corn silage @ \$32.00 per ton			1.9 tons	60.80	_____
Supplement and minerals @ \$0.23 per pound	160 pounds	36.80	160 pounds	36.80	_____
Total Feed Costs		\$446.80		\$412.00	\$ _____
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 @ 6%	2.75 months	6.57	2.75 months	6.09	_____
Labor @ \$14.00 per hour	2 hours	28.00	2 hours	28.00	_____
Death loss ^{a/}		13.89		13.72	_____
Total Variable Costs		\$1,659.42		\$1,623.96	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Feedlot facilities & equipment		\$16.00		\$16.00	\$ _____
Total of All Costs		\$1,675.42		\$1,639.96	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per pound		\$1.23		\$1.20	\$ _____
Breakeven selling price for all costs per pound		\$1.24		\$1.21	\$ _____

^{a/} Death loss cost is assumed to be 1 percent of feeder purchase costs and 0.5 percent 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

	<u>Winter Corn and Hay Ration</u>		<u>Summer Improved Pasture</u>		<u>Your Farm</u>
Income	Quantity		Quantity		
Feeder cattle sales (\$_____/pound)	750 pounds	\$_____	750 pounds	_____	\$_____
Variable Costs					
Calf purchase @ \$1.80 per pound	450 pounds	\$810.00	525 pounds	\$945.00	\$_____
Interest @ 6% annual	5 months	20.25	5 months	23.63	_____
Feed Costs					
Corn @ \$3.40 per bushel	27 bushels	\$91.80			\$_____
Alfalfa - brome hay @ \$120.00 per ton	0.5 tons	60.00			_____
Supplement & minerals @ \$0.23 per pound	80 pounds	18.40	35 pounds	\$8.05	_____
Improved pasture @ \$75.00 per acre			0.7 acre	52.50	_____
Pasture fert, misc costs @ \$20.00 per acre			0.7 acre	14.00	_____
Total Feed Costs		\$170.20		\$74.55	\$_____
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 @ 6%	2.5 months	2.40	2.5 months	1.20	_____
Labor @ \$14.00 per hour	1.25 hours	17.50	1 hour	14.00	_____
Death loss ^{al}		9.36		10.24	_____
Total Variable Costs		\$1,051.21		\$1,089.86	\$_____
Income over Variable Costs		\$_____		\$_____	\$_____
Fixed Costs					
Machinery, equipment, housing		\$14.00		\$2.10	\$_____
Total of All Costs		\$1,065.21		\$1,091.96	\$_____
Income over All Costs		\$_____		\$_____	\$_____
Breakeven selling price for variable costs per pound		\$1.40		\$1.45	\$_____
Breakeven selling price for all costs per pound		\$1.42		\$1.46	\$_____

^{al} Death loss cost is assumed to be 1 percent of feeder purchase costs and 0.5 percent 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 \$_____/pound)	500 pounds	\$ _____	1,000 pounds	\$ _____	\$ _____
Steer calf (0.46 head x \$_____/pound)	550 pounds	\$ _____	1,100 pounds	\$ _____	\$ _____
Cull cow (0.18 head x \$_____/pound)	1,350 pounds	\$ _____	1,150 pounds	\$ _____	\$ _____
Gross Income		\$ _____		\$ _____	\$ _____
Variable Costs					
Feed Costs					
Pasture @ \$50.00 per acre	2.5 acres	\$125.00	2.5 acres	\$125.00	\$ _____
Pasture fert, misc @ \$20.00 per acre	2.5 acres	50.00	2.5 acres	50.00	_____
Corn @ \$3.40 per bushel	4 bushels	13.60	56 bushels	190.40	_____
Modified distiller grain @ \$60.00 per ton			1.05 tons	63.00	_____
Salt & mineral @ \$0.09 per pound	60 pounds	5.40	60 pounds	5.40	_____
Supplement & minerals @ \$0.23 per pound			128 pounds	29.44	_____
Alfalfa - brome hay @ \$120.00 per ton	2.1 tons	252.00	2.5 tons	300.00	_____
Corn stalks @ \$3.00 per acre	4 acres	12.00	4 acres	12.00	_____
Total Feed Costs		\$458.00		\$775.24	\$ _____
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 @ 6%	6 months	15.54	9 months	38.76	_____
Labor @ \$14.00 per hour	8 hours	112.00	10 hours	140.00	_____
Total Variable Costs		\$645.54		\$1,040.00	\$ _____
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		\$830.84		\$1,235.30	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per pound ^{b/}		\$1.44		\$1.24	\$ _____
Breakeven selling price for all costs per pound ^{b/}		\$1.93		\$1.49	\$ _____

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

Ewe Flock – One Ewe ^{a/}

	Early Lambing (Jan-Feb)		Late Lambing (Apr-May)		Your Farm
Income	Quantity		Quantity		
Lambs (125 pounds x \$_____/pound)	1.24 head	\$ _____	1.33 head	\$ _____	\$ _____
Cull ewes (150 pounds x \$_____/pound)	0.15 head	\$ _____	0.15 head	\$ _____	\$ _____
Wool (\$_____/pound)	9 pounds	\$ _____	11 pounds	\$ _____	\$ _____
Gross Income		\$ _____		\$ _____	\$ _____
Variable Costs					
Feed Costs					
Corn @ \$3.40 per bushel	10 bushel	\$34.00	8 bushels	\$27.20	\$ _____
Supplement & minerals @ \$0.16 per pound	100 pounds	16.00	60 pounds	9.60	_____
Alfalfa - brome hay @ \$120.00 per ton	0.4 tons	48.00	0.3 tons	36.00	_____
Pasture @ \$50.00 per acre	0.2 acres	10.00	0.3 acres	15.00	_____
Pasture fertilizer, misc @ \$20.00 per acre	0.2 acres	4.00	0.3 acres	6.00	_____
Total Feed Costs		\$112.00		\$93.80	\$ _____
Veterinary, medical, shearing		\$8.00		\$9.00	\$ _____
Machinery and equipment operating		5.00		4.00	_____
Marketing and miscellaneous		5.00		5.00	_____
Interest on variable costs @ 6%	6 months	3.90	6 months	3.35	_____
Labor @ \$14.00 per hour	5 hours	70.00	3 hours	42.00	_____
Total Variable Costs		\$203.90		\$157.15	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, equipment, housing, fencing		\$15.40		\$14.93	\$ _____
Interest, insurance on breeding flock @ 10%		15.90		15.90	_____
Ram replacement		5.60		5.60	_____
Total Fixed Costs		\$36.90		\$36.43	\$ _____
Total of All Costs		\$240.80		\$193.58	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Breakeven selling price for variable costs per pound ^{b/}		\$1.23		\$0.87	\$ _____
Breakeven selling price for all costs per pound ^{b/}		\$1.47		\$1.09	\$ _____

^{a/} 160 percent (early) or 170 percent (late) lamb crop, 20 percent replacement rate. One unit includes one ewe, 0.2 replacement ewe, 1.6 lambs, and 0.04 ram. Death loss of 10 percent for lambs weaned and 5 percent for ewes and ewe lambs assumed.

^{b/} Assumes cull ewe income of \$8.00 and wool income of \$4.50 (early) or \$5.50 (late) per unit.

Ewe Flock Investment

1. Breeding flock investment per ewe unit

Ewe	\$125.00	
Replacement ewe lamb (\$100.00 x 0.20 per ewe)	\$20.00	
Ram (\$350.00 divided by 25 ewes)	<u>\$14.00</u>	
Total	\$159.00	per unit

2. Ram replacement cost per ewe unit

Ram cost, \$350.00	minus cull value, \$70.00	divided by ewes, 25 ewes	divided by number of years, 2 years	\$5.60	per unit
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3. Facilities and machinery investment (150 ewes) (replacement cost)

	<u>Early Lambing</u>	<u>Late Lambing</u>
Utility tractor (\$18,000 x 25% use for sheep)	\$4,500	\$4,500
Fences (\$100.00 per acre times 30 acres or 45 acres)	\$3,000	\$4,500
Feed storage	\$2,000	\$2,000
Barns, pens, feeders, etc.	<u>\$7,000</u>	<u>\$5,000</u>
Total	\$16,500	\$16,000
Total investment per ewe (150 ewe flock)	\$110.00	\$106.67
Depreciation, interest, taxes, insurance @ 14% annually	\$15.40	\$14.93

Feeder Lamb – One Head

Income			Your Farm
Lamb (125 pounds x \$_____/pound)		\$ _____	\$ _____
Wool (3 pounds x \$_____/pound)		\$ _____	\$ _____
Gross Income		\$ _____	\$ _____
Variable Costs			
Feeder cost @ \$2.00 per pound	70 pounds	\$140.00	\$ _____
Interest @ 6%	100 days	2.30	_____
Feed Costs			
Corn @ \$3.40 per bushel	5.2 bushels	\$17.61	\$ _____
Supplement & minerals @ \$0.16 per pound	32 pounds	5.12	_____
Alfalfa - brome hay @ \$120.00 per ton	35 pounds	2.10	_____
Total Feed Costs		\$24.83	\$ _____
Veterinary, medical, shearing		\$5.00	\$ _____
Machinery and equipment		1.00	_____
Marketing, miscellaneous		2.00	_____
Interest on variable costs @ 6%	60 days	0.32	_____
Death loss ^{al}		3.32	_____
Labor @ \$14.00 per hour	1.0 hours	14.00	_____
Total Variable Costs		\$192.77	\$ _____
Income over Variable Costs		\$ _____	\$ _____
Fixed Costs			
Machinery, equipment, housing		\$3.50	\$ _____
Total of All Costs		\$196.27	\$ _____
Income over All Costs		\$ _____	\$ _____
Breakeven selling price for variable costs per pound ^{al}		\$1.52	\$ _____
Breakeven selling price for all costs per pound ^{al}		\$1.55	\$ _____

^{al} Assumes wool income of \$3.00 per head and death loss of 2 percent.

Lamb Feed Requirements

Table 1. Feed Requirement and Portion of Year on Feed to Finish Lamb to 110 pounds

Beginning Weight of Feeder, pounds	Corn		Supplement (32-36%), pounds	Hay pounds	Days on Feed	Pounds feed per pound of gain
	Bushels	Pounds				
60	3.60	202	39	35	100	5.50
65	3.37	189	34	30	90	5.65
70	3.12	175	29	25	80	5.70
75	2.81	157	24	22	70	5.85
80	2.50	140	19	18	60	5.90
85	2.16	121	15	14	50	6.05

Table 2. Approximate Feed Requirement When Feeding Complete Pelleted Rations

Beginning Weight of Feeder, pounds	Pounds feed per pound of gain	Complete Feed-pelleted (pounds)	Time on Feed	
			Days	Portion of year
60	5.70	285	90	0.25
65	5.80	261	82	0.22
70	5.90	236	73	0.20
75	6.00	210	64	0.18
80	6.10	183	55	0.15
85	6.20	155	45	0.12

Table 3. Approximate Feed Requirement When Feeding Low Roughage

Beginning Weight of Feeder, pounds	Mainly Corn and Supplement Rations			Time on Feed	
	Roughage	Grain	Supplement	Days	Portion of year
75	15	158	24	67	0.18
80	13	139	19	58	0.16
85	10	120	15	48	0.13

Grade A Dairy – One Cow Unit

	20,000 pounds of milk per cow annually		24,000 pounds of milk per cow annually		Your Farm
Income					
Milk sales (\$_____/cwt) ^{a/}	200 cwt	\$ _____	240 cwt	\$ _____	\$ _____
Cull cow (\$_____/pound)	0.36 head@1,350 pounds	\$ _____	0.39 head@1,400 pounds	\$ _____	\$ _____
Dairy calf (\$_____/head)	0.51 head	\$ _____	0.52 head	\$ _____	\$ _____
Replacement heifer (\$_____/head)	0.18 head	\$ _____	0.21 head	\$ _____	\$ _____
Gross Income		\$ _____		\$ _____	\$ _____
Variable Costs					
Feed Costs					
Corn equivalents @ \$3.40 per bushel	104 bushels	\$353.60	113 bushels	\$384.20	\$ _____
Corn silage @ \$32.00 per ton	8.0 tons	256.00	8.0 tons	256.00	_____
Hay equivalents @ \$140.00 per ton	6.1 tons	854.00	6.0 tons	840.00	_____
Salts and minerals ^{b/}	242 pounds@\$0.21/pound	50.82	323 pounds@\$0.20/pound	64.60	_____
Protein supplement @ \$0.12 per pound	1,285 pounds	154.20	1,855 pounds	222.60	_____
Cottonseed @ \$0.15 per pound	725 pounds	108.75	1,361 pounds	204.15	_____
Fat @ \$0.30 per pound	26 pounds	7.80	111 pounds	33.30	_____
Milk replacer, calf starter		90.00		90.00	_____
Total Feed Costs		\$1,875.17		\$2,094.85	\$ _____
Hauling @ \$0.29 per cwt	200 cwt	\$58.00	240 cwt	\$69.60	\$ _____
Veterinary and health		98.00		118.00	_____
Fuel, utilities and repairs		150.00		160.00	_____
DHIA & accounting		28.00		30.00	_____
Breeding fees		40.00		50.00	_____
Bedding, supplies and miscellaneous		160.00		170.00	_____
Interest on variable costs @ 6%	3 months	36.14	3 months	40.39	_____
Labor @ \$14.00 per hour	70 hours	980.00	70 hours	980.00	_____
Total Variable Costs		\$3,425.31		\$3,712.84	\$ _____
Income over Variable Costs		\$ _____		\$ _____	\$ _____
Fixed Costs					
Machinery, equipment, facilities		\$520.00		\$520.00	\$ _____
Interest, insurance on herd @ 10%		239.00		276.30	_____
Total Fixed Costs		\$759.00		\$796.30	\$ _____
Total of All Costs		\$4,184.31		\$4,509.14	\$ _____
Income over All Costs		\$ _____		\$ _____	\$ _____
Income from cull cows, calves, and heifers		\$300.00		\$320.00	\$ _____
Breakeven selling price for variable costs per cwt		\$15.63		\$14.14	\$ _____
Breakeven selling price for all costs per cwt		\$19.42		\$17.45	\$ _____

^{a/} Milk price per cwt is a total based on the following price components: butterfat, protein, other solids, producer price differential, quality, volume, and capital payout.

^{b/} Salt and mineral packages vary in the rations for different levels of production.

Dairy Investment

1. Breeding herd investment per cow unit

	20,000 pounds milk per cow annually		24,000 pounds milk per cow annually	
Dairy cow	1.00 head @ \$1,600	\$1,600	1.00 head @ \$1,800	\$1,800
Replacement dairy heifer	0.40 head @ \$1,400	560	0.43 head @ \$1,600	688
Replacement dairy calf	0.46 head @ \$500	<u>230</u>	0.50 head @ \$550	<u>275</u>
Total investment per cow unit		\$2,390		\$2,763

2. Facilities, equipment, and machinery investment (replacement cost)

	20,000 pounds	24,000 pounds
Dairy barn, pens, shelter	\$125,000	\$125,000
Milk house, stanchion, cooler, etc.	35,000	35,000
Feed storage	40,000	40,000
Utility tractor	30,000	30,000
Manure and feed handling equipment	<u>30,000</u>	<u>30,000</u>
Total Investment	\$260,000	\$260,000
Total investment per cow for 70 cow herd	\$3,714	\$3,714
Depreciation, interest, taxes, insurance @ 14% annually	\$520	\$520

3. Feed requirements per cow unit

Pounds of milk per year	20,000 pounds	24,000 pounds
Corn silage (tons)	8.0	8.0
Hay equivalents (tons)	6.1	6.0
Corn equivalents (bushels)	104	113
Protein supplement (pounds)	1,285	1,855
Salt and mineral (pounds)	242	323
Whole (linted) cottonseed (pounds)	725	1361
Fat (pounds)	26	111