

# Livestock Enterprise Budgets for Iowa — 2010

*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 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 the production period.

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

	Price	Units
Corn	\$3.50	bushel
Corn silage	32.00	ton
Alfalfa hay	125.00	ton
Alfalfa-brome hay	85.00	ton
Haylage	34.00	ton
Unimproved pasture	35.00	acre
Improved pasture	50.00	acre
Soybean meal (48%)	0.13	pound
Dried distiller grain	0.06	pound
Modified distiller grain	0.03	pound
Lamb supplement/mineral	0.15	pound
Sow & pig vitamin/mineral	0.45	pound
Hog vitamin/mineral	0.30	pound
Beef supplement/mineral	0.16	pound
Dairy supplement	0.10	pound
Dairy salt and mineral	0.16	pound
Dairy commodities	0.09	pound
Dairy fat	0.30	pound
Feeder pig (50 lbs)	50.00	head
Yearling steer (700-800 lbs)	1.05	pound
Yearling heifer (650-750 lbs)	1.00	pound
Steer calf (500-600 lbs)	1.14	pound
Heifer calf (400-500 lbs)	1.14	pound
Feeder lamb (70 lbs)	0.95	pound
Operating capital	9.00%	year

**... and justice for all**

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Prepared by **Shane Ellis, extension specialist**  
**(515) 294-8030, shanee@iastate.edu**  
**William Edwards, extension economist**  
**(515) 294-6161, wedwards@iastate.edu**  
**John Lawrence, extension economist, and**  
**Ann Johanns, extension program specialist**  
**(641) 732-5574, aholste@iastate.edu**

**[www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm)**  
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## Livestock Enterprise Summary

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Page	Enterprise	Unit	Labor Hours	Bushels of Corn	Tons of Modified Distiller Grain	Tons of Dried Distiller Grain	Tons of Hay <sup>a/</sup>	Tons of Silage
<b><u>Swine</u></b>								
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, tot. confinement	head	0.7	9.8	0	32	0	0
<b><u>Beef</u></b>								
11	Yearling steers, hay	head	2	50	0.95	0	0.25	0
11	Yearling steers, silage	head	2	41	0.95	0	0	1.10
12	Steer calves, hay	head	3	52	1.05	0	0.40	0
12	Steer calves, silage	head	3	38	1.05	0	0	1.70
13	Yearling heifers, hay	head	2	50	0.95	0	0.25	0
13	Yearling heifers, silage	head	2	41	0.95	0	0	1.10
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
<b><u>Sheep</u></b>								
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
<b><u>Dairy</u></b>								
21	20,000 lbs milk/cow	cow unit	70	104	0	0	6.1	8.0
21	24,000 lbs milk/cow	cow unit	70	113	0	0	6.0	8.0

<sup>a/</sup> Does not include pasture.

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## 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 & 2.2 litters per year per sow)	\$122	\$90

### 2. Cost Estimates (Building and equipment replacement cost)

Use	<u>Pasture</u>		<u>Confinement</u> <sup>a/</sup>	
	Structure Type	Cost per space	Structure Type	Cost per space
Farrowing	Pasture A-frame huts	\$300	Enclosed confinement	
Gestation	Portable on pasture	\$150	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> <sup>a/</sup>
Farrowing	\$300 / 2 lit/yr/hut = \$150	
Gestation	\$150 / 1.9 lit/sow = 79	\$1,000 / 2.2 lit/sow = \$455
Nursery	\$50 / 2 lit/yr x 7.6 = 190	\$112 / 6 lit/yr x 8.8 = 164
Finishing	\$30 / 2 lit/yr x 7.1 = 107	\$200 / 2.5 lit/yr x 8.5 = 680
Feed Storage		50
Feed Handling		25
Manure Handling		15
Tractor	<u>(\$18,000 x 25%)</u> 50 lit/yr = <u>90</u>	
Total Investment	\$706	\$1,299
Interest, depreciation, taxes, insurance	14% annually \$99	10% annually \$130

<sup>a/</sup> Farrowing & Gestation are combined for Confinement operations.

## Swine Production Investment (continued)

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

		<u>Feeder Pig Production</u>				
			Annually	Per litter	Per head	
Farrowing & Gestation						
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>				
			Annually	Per litter	Per head	
Finishing						
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</u>	<u>Bushels of Corn</u>	<u>Pounds of Soybean meal</u>	<u>Pounds of DDG</u>
<u>Per Year</u>	<u>Per Litter</u>	<u>Per Litter</u>	<u>Per Litter</u>
14	159	1,814	204
16	179	2,052	233
18	199	2,290	262
20	219	2,528	291

### 6. Break-even selling price for confinement farrow-to-finish if corn price is:

<u>Corn</u>	<u>Soybean Meal</u>	<u>DDG</u>	<u>Total Costs</u>	<u>Variable Costs</u>
<u>(\$ per bushel)</u>	<u>(\$ per pound)</u>	<u>(\$ per pound)</u>	<u>\$/cwt</u>	<u>\$/cwt</u>
3.25	0.14	0.05	49.71	42.89
3.50	0.14	0.05	50.90	44.07
3.75	0.15	0.06	52.68	45.85
4.00	0.15	0.06	53.86	47.04
4.25	0.16	0.07	55.64	48.82
4.50	0.16	0.07	56.83	50.00
4.75	0.17	0.08	58.61	51.78

## Swine Production — One Litter

	<b>Farrow-to-Finish Pasture</b>		<b>Farrow-to-Finish Total Confinement</b>		<b>Your Farm</b>
<b>Income <sup>a/</sup></b>	<b>Quantity</b>		<b>Quantity</b>		
Market hogs (260 lbs x \$ _____/lb)	7.3 head	\$ _____	8.50 head	\$ _____	\$ _____
Cull sows (400 lbs x \$ _____/lb)	0.5 head	\$ _____	0.25 head	\$ _____	\$ _____
<b>Gross Income</b>		\$ _____		\$ _____	\$ _____
<b>Variable Costs</b>					
Feed Costs					
Corn @ \$3.50 per bushel	97 bu	\$339.50	105 bu	\$367.50	\$ _____
Soybean meal @ \$0.13 per lb	943 lbs	122.59	1,013 lbs	131.69	_____
Dried distiller grain @ \$0.06 per lb	267 lbs	16.02	288 lbs	17.28	_____
Vitamin & minerals @ \$0.45 per lb	35 lbs	15.75	36 lbs	16.20	_____
Vitamin & minerals @ \$0.30 per lb	95 lbs	28.50	110 lbs	33.00	_____
Pasture @ \$35.00 per acre	0.20 ac	7.00			_____
Feed Additives		22.00		25.00	_____
<b>Total Feed Costs</b>		\$551.36		\$590.67	\$ _____
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 @ 9%	5 months	24.95	5 months	26.09	_____
Labor @ \$14.00 per hour	12 hours	168.00	6 hours	84.00	_____
<b>Total Variable Costs</b>		\$858.31		\$805.76	\$ _____
<b>Income over Variable Costs</b>		\$ _____		\$ _____	\$ _____
<b>Fixed Costs</b>					
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	_____
<b>Total Fixed Costs</b>		\$201.74		\$195.42	\$ _____
<b>Total of All Costs</b>		\$1,060.05		\$1,001.18	\$ _____
<b>Income over All Costs</b>		\$ _____		\$ _____	\$ _____
Break-even selling price for variable costs per cwt <sup>b/</sup>		\$41.53		\$34.88	\$ _____
Break-even selling price for all costs per cwt <sup>b/</sup>		\$52.16		\$43.72	\$ _____

<sup>a/</sup> 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%.

<sup>b/</sup> 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 \$_____/lb)	1 head	\$ _____	\$ _____
<b>Variable Costs</b>			
Feeder pig (50 lb) @ \$50.00 per hd	1 head	\$50.00	\$ _____
Interest @ 9%	5 months	1.88	\$ _____
<b>Feed Costs</b>			
Corn @ \$3.50 per bushel	9 bu	\$31.50	\$ _____
Soybean meal @ \$0.13 per lb	82 lbs	10.66	_____
Dried distiller grain @ \$0.06 per lb <sup>a/</sup>	32 lbs	1.92	_____
Vitamin & minerals @ \$0.45 per lb	14.4 lbs	6.48	_____
Feed processing & delivery @ \$10.00 per ton	0.3 tons	3.00	_____
Feed Additives		3.00	_____
<b>Total Feed Costs</b>		\$56.56	\$ _____
Veterinary and medical		\$4.00	\$ _____
Fuel, repairs, utilities		3.50	_____
Marketing, miscellaneous		4.00	_____
Manure application cost @ \$0.01 per gal	190 gal	1.90	_____
Interest on variable costs @ 9%	2.5 months	1.28	_____
Death loss	0.02 head	1.00	_____
Labor @ \$14.00 per hour	0.2 hours	2.80	_____
<b>Total Variable Costs</b>		\$126.91	\$ _____
<b>Income over Variable Costs</b>		\$ _____	\$ _____
<b>Fixed Costs</b>			
Machinery, facilities		\$8.63	\$ _____
<b>Total of All Costs</b>		\$135.54	\$ _____
<b>Income over All Costs</b>		\$ _____	\$ _____
Break-even selling price for variable costs per cwt		\$48.81	\$ _____
Break-even selling price for all costs per cwt		\$52.13	\$ _____

<sup>a/</sup> Dried distiller grain substitutes for 0.6 bushels of corn and 5 pounds of soybean meal.

## Swine Production — One Litter

### Producing Weaned 12 lbs Pigs, Total Confinement

Income <sup>a/</sup>	Quantity		Your Farm
Weaned pigs (\$ _____/head)	9 head	\$ _____	\$ _____
Cull sows (\$ _____/head)	0.25 hd/litter	\$ _____	\$ _____
<b>Gross Income</b>		\$ _____	\$ _____
<b>Variable Costs</b>			
Feed Costs			
Corn @ \$3.50 per bushel	17.1 bu	\$59.85	\$ _____
Soybean meal @ \$0.13 per lb	149 lbs	19.37	_____
Vitamin & minerals @ \$0.45 per lb	23 lbs	10.35	_____
Feed processing & delivery @ \$10.00 per ton	0.6 tons	6.00	_____
Total Feed Costs		\$95.57	\$ _____
Veterinary and medical		\$17.00	\$ _____
Fuel, repairs, utilities		7.50	_____
Marketing, miscellaneous		10.00	_____
Manure application cost @ \$0.01 per gal	300 gal	3.00	_____
Interest on variable costs @ 9%	3 months	2.99	_____
Labor @ \$14.00 per hour	3 hours	42.00	_____
<b>Total Variable Costs</b>		\$178.06	\$ _____
<b>Income over Variable Costs</b>		\$ _____	\$ _____
<b>Fixed Costs</b>			
Facilities & equipment		\$66.15	\$ _____
Breeding costs, boar/semens		13.00	_____
Replacement gilts @ \$155 head	0.28 head	43.40	_____
Interest, insurance on sows @ 10%	5 months	6.46	_____
<b>Total Fixed Costs</b>		\$129.01	\$ _____
<b>Total of All Costs</b>		\$307.07	\$ _____
<b>Income over All Costs</b>		\$ _____	\$ _____
Break-even selling price for variable costs per head <sup>b/</sup>		\$15.06	\$ _____
Break-even selling price for all costs per head <sup>b/</sup>		\$29.40	\$ _____

<sup>a/</sup> Assuming an average of 9.0 weaned pigs per litter and all replacement gilts are purchased.

<sup>b/</sup> Cull sow income of \$37.19 per litter is assumed (sows sold after 4 litters).

## Swine Production — One Pig Finishing 12 lb Weaned Pig, Total Confinement

Income			Your Farm
Market hog (260 lbs x \$_____ /lb)		\$ _____	\$ _____
<b>Variable Costs</b>	<b>Quantity</b>		
Weaned Feeder pig (12 lb)		\$32.00	\$ _____
Interest @ 9%	150 days	1.18	\$ _____
Feed Costs			
Corn @ \$3.50 per bushel	9.8 bu	\$34.30	\$ _____
Soybean meal @ \$0.13 per lb	119 lbs	15.47	_____
Dried distiller grain @ \$0.06 per lb <sup>a/</sup>	32 lbs	1.92	_____
Vitamin & minerals @ \$0.45 per lb	14.4 lbs	6.48	_____
Pre-nursery diet		3.00	_____
Feed Additives		3.00	_____
Feed processing & delivery @ \$10.00 per ton		3.60	_____
<b>Total Feed Costs</b>		\$67.77	\$ _____
Veterinary and medical		\$5.00	\$ _____
Fuel, repairs, utilities		4.20	_____
Marketing, miscellaneous		4.00	_____
Manure application cost		2.20	_____
Interest on variable costs @ 9%	3 months	0.94	_____
Death loss <sup>b/</sup>	0.05 head	1.60	_____
Labor @ \$14.00 per hour	0.70 hours	9.80	_____
<b>Total Variable Costs</b>		\$128.69	\$ _____
<b>Income over Variable Costs</b>		\$ _____	\$ _____
<b>Fixed Costs</b>			
Facilities & equipment		\$11.28	\$ _____
<b>Total of All Costs</b>		\$139.97	\$ _____
<b>Income over All Costs</b>		\$ _____	\$ _____
Break-even selling price for variable costs per cwt		\$53.62	\$ _____
Break-even selling price for all costs per cwt		\$58.32	\$ _____

<sup>a/</sup> Dried distiller grain substitutes for 0.6 bushels of corn and 5 pounds of soybean meal.

<sup>b/</sup> Assumed death loss is 5 percent.

## Feed Requirements and Conversion Rates to Carry Hogs from Various Purchased Weights to Various Market Weights<sup>a/</sup>

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

<sup>a/</sup> 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 in 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>
<b>Income</b>	<b>Quantity</b>		<b>Quantity</b>		
Steer sales (1,250 lbs x \$_____/lb)	1,250 lbs	\$_____	1,250 lbs	\$_____	\$_____
<b>Variable Costs</b>					
Yearling feeder cost @ \$1.05 per lb	750 lbs	\$787.50	750 lbs	\$787.50	\$_____
Interest @ 9%	5.5 months	32.48	5.5 months	32.48	_____
<b>Feed Costs</b>					
Corn @ \$3.50 per bushel	50 bu	\$175.00	41 bu	\$143.50	\$_____
Mid-grade hay @ \$85.00 per ton	0.25 tons	21.25			_____
Modified distiller grain @ \$60.00 per ton	0.95 tons	57.00	0.95 tons	57.00	_____
Supplement & minerals @ \$0.16 per lb	100 lbs	16.00	100 lbs	16.00	_____
Corn silage @ \$32.00 per ton			1.10 tons	35.20	_____
<b>Total Feed Costs</b>		\$269.25		\$216.50	\$_____
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	6.19	2.75 months	5.10	_____
Labor @ \$14.00 per hour	2 hours	28.00	2 hours	28.00	_____
Death loss <sup>a/</sup>		9.87		9.60	_____
<b>Total Variable Costs</b>		\$1,164.30		\$1,110.19	\$_____
<b>Income over Variable Costs</b>		\$_____		\$_____	\$_____
<b>Fixed Costs</b>					
Machinery, equipment, housing		\$14.00		\$14.00	\$_____
<b>Total of All Costs</b>		\$1,178.30		\$1,124.19	\$_____
<b>Income over All Costs</b>		\$_____		\$_____	\$_____
Break-even selling price for variable costs per lb		\$0.93		\$0.89	\$_____
Break-even selling price for all costs per lb		\$0.94		\$0.90	\$_____

<sup>a/</sup> 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>
<b>Income</b>	<b>Quantity</b>		<b>Quantity</b>		
Fed steer sale (1,150 lbs x \$ _____/lb)	1,150 lbs	\$ _____	1,150 lbs	\$ _____	\$ _____
<b>Variable Costs</b>					
Calf feeder cost @ \$1.14 per lb	550 lbs	\$627.00	550 lbs	\$627.00	\$ _____
Interest @ 9%	7 months	32.92	7 months	32.92	_____
<b>Feed Costs</b>					
Corn @ \$3.50 per bushel	52 bu	\$182.00	38 bu	\$133.00	\$ _____
Mid-grade hay @ \$85.00 per ton	0.4 tons	34.00			_____
Modified distiller grain @ \$60.00 per ton	1.05 tons	63.00	1.05 tons	63.00	_____
Supplement & minerals @ \$0.16 per lb	130 lbs	20.80	130 lbs	20.80	_____
Corn silage @ \$32.00 per ton			1.70 tons	54.40	_____
<b>Total Feed Costs</b>		<b>\$299.80</b>		<b>\$271.20</b>	<b>\$ _____</b>
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	8.79	3.5 months	8.04	_____
Labor @ \$14.00 per hour	3 hours	42.00	3 hours	42.00	_____
Death loss <sup>a/</sup>		17.05		16.76	_____
<b>Total Variable Costs</b>		<b>\$1,062.56</b>		<b>\$1,032.92</b>	<b>\$ _____</b>
<b>Income over Variable Costs</b>		<b>\$ _____</b>		<b>\$ _____</b>	<b>\$ _____</b>
<b>Fixed Costs</b>					
Machinery, equipment, housing		\$21.00		\$21.00	\$ _____
<b>Total of All Costs</b>		<b>\$1,083.56</b>		<b>\$1,053.92</b>	<b>\$ _____</b>
<b>Income over All Costs</b>		<b>\$ _____</b>		<b>\$ _____</b>	<b>\$ _____</b>
Break-even selling price for variable costs per lb		\$0.92		\$0.90	\$ _____
Break-even selling price for all costs per lb		\$0.94		\$0.92	\$ _____

<sup>a/</sup> 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>
<b>Income</b>	<b>Quantity</b>			<b>Quantity</b>			
Fed heifer sale (1,100 lbs x \$_____/lb)	1,100	lbs	\$_____	1,100	lbs	\$_____	\$_____
<b>Variable Costs</b>							
Yearling feeder cost @ \$1.00 per lb	700	lbs	\$700.00	700	lbs	\$700.00	\$_____
Interest @ 9%	155	days	26.75	155	days	26.75	_____
<b>Feed Costs</b>							
Corn @ \$3.50 per bushel	50	bu	\$175.00	41	bu	\$143.50	\$_____
Mid-grade hay @ \$85.00 per ton	0.25	tons	21.25				_____
Modified distiller grain @ \$60.00 per ton	0.95	tons	57.00	0.95	tons	57.00	_____
Corn silage @ \$32.00 per ton				1.1	tons	35.20	_____
Supplement & minerals @ \$0.16 per lb	100	lbs	16.00	100	lbs	16.00	_____
<b>Total Feed Costs</b>			\$269.25			\$251.70	\$_____
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	6.19	2.75	months	5.83	_____
Labor @ \$14.00 per hour	2	hours	28.00	2	hours	28.00	_____
Death loss <sup>a/</sup>			8.94			8.85	_____
<b>Total Variable Costs</b>			\$1,070.14			\$1,052.13	\$_____
<b>Income over Variable Costs</b>			\$_____			\$_____	\$_____
<b>Fixed Costs</b>							
Feedlot facilities & equipment			\$16.00			\$16.00	\$_____
<b>Total of All Costs</b>			\$1,086.14			\$1,068.13	\$_____
<b>Income over All Costs</b>			\$_____			\$_____	\$_____
Break-even selling price for variable costs per lb			\$0.97			\$0.96	\$_____
Break-even selling price for all costs per lb			\$0.99			\$0.97	\$_____

<sup>a/</sup> 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

	<u>Winter Corn and Hay Ration</u>		<u>Summer Improved Pasture</u>		<u>Your Farm</u>
<b>Income</b>	<b>Quantity</b>		<b>Quantity</b>		
Feeder cattle sales (\$ _____/lb)	750 lbs	\$ _____	750 lbs	\$ _____	\$ _____
<b>Variable Costs</b>					
Calf purchase @ \$1.14 per lb	450 lbs	\$513.00	525 lbs	\$598.50	\$ _____
Interest @ 9% annual	5 months	19.24	5 months	22.44	_____
<b>Feed Costs</b>					
Corn @ \$3.50 per bushel	27 bu	\$94.50			\$ _____
Alfalfa - brome hay @ \$85.00 per ton	0.5 tons	42.50			_____
Supplement & minerals @ \$0.16 per lb	80 lbs	12.80	35 lbs	\$5.60	_____
Improved pasture @ \$50.00 per acre			0.7 acre	35.00	_____
Pasture fert, misc costs @ \$20.00 per acre			0.7 acre	14.00	_____
<b>Total Feed Costs</b>		\$149.80		\$54.60	\$ _____
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	3.21	2.5 months	1.42	_____
Labor @ \$14.00 per hour	1.25 hours	17.50	1 hour	14.00	_____
Death loss <sup>a/</sup>		6.28		6.67	_____
<b>Total Variable Costs</b>		\$730.53		\$718.88	\$ _____
<b>Income over Variable Costs</b>		\$ _____		\$ _____	\$ _____
<b>Fixed Costs</b>					
Machinery, equipment, housing		\$14.00		\$2.10	\$ _____
<b>Total of All Costs</b>		\$744.53		\$720.98	\$ _____
<b>Income over All Costs</b>		\$ _____		\$ _____	\$ _____
Break-even selling price for variable costs per lb		\$0.97		\$0.96	\$ _____
Break-even selling price for all costs per lb		\$0.99		\$0.96	\$ _____

<sup>a/</sup> 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 <sup>a/</sup>

	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	\$ _____	\$ _____
<b>Gross Income</b>		\$ _____		\$ _____	\$ _____
<b>Variable Costs</b>					
Feed Costs					
Pasture @ \$35.00 per acre	2.5 acres	\$87.50	2.5 acres	\$87.50	\$ _____
Pasture fert, misc costs @ \$20 per acre	2.5 acres	50.00	2.5 acres	50.00	_____
Corn @ \$3.50 per bushel	4 bu	14.00	56 bu	196.00	_____
Modified distiller grain @ \$60.00 per ton			1.05 tons	63.00	_____
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 @ \$85.00 per ton	2.1 tons	178.50	2.5 tons	212.50	_____
Corn stalks @ \$3.00 per acre	4 acres	12.00	4 acres	12.00	_____
Total Feed Costs		\$347.40		\$646.88	\$ _____
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	18.33	9 months	49.47	_____
Labor @ \$14.00 per hour	8 hours	112.00	10 hours	140.00	_____
<b>Total Variable Costs</b>		\$537.73		\$922.35	\$ _____
<b>Income over Variable Costs</b>		\$ _____		\$ _____	\$ _____
<b>Fixed Costs</b>					
Machinery, equipment, fences		\$65.10		\$75.10	\$ _____
Interest, insurance on herd @ 10%		108.20		108.20	_____
Bull depreciation/replacement		12.00		12.00	_____
<b>Total Fixed Costs</b>		\$185.30		\$195.30	\$ _____
<b>Total of All Costs</b>		\$723.03		\$1,117.65	\$ _____
<b>Income over All Costs</b>		\$ _____		\$ _____	\$ _____
Break-even selling price for variable costs per lb <sup>b/</sup>		\$1.16		\$1.08	\$ _____
Break-even selling price for all costs per lb <sup>b/</sup>		\$1.64		\$1.34	\$ _____

<sup>a/</sup> 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.

<sup>b/</sup> 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.

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## Beef Cow-Calf Investment

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### 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

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## Ewe Flock — One Ewe <sup>a/</sup>

	Early Lambing (Jan-Feb)		Late Lambing (Apr-May)		Your Farm
Income	Quantity		Quantity		
Lambs (125 lbs x \$ _____/lb)	1.24 head	\$ _____	1.33 head	\$ _____	\$ _____
Cull ewes (150 lbs x \$ _____/lb)	0.15 head	\$ _____	0.15 head	\$ _____	\$ _____
Wool (\$ _____/lb)	9 lbs	\$ _____	11 lbs	\$ _____	\$ _____
<b>Gross Income</b>		\$ _____		\$ _____	\$ _____
<b>Variable Costs</b>					
Feed Costs					
Corn @ \$3.50 per bushel	10 bu	\$35.00	8 bu	\$28.00	\$ _____
Supplement & minerals @ \$0.15 per lb	100 lbs	15.00	60 lbs	9.00	_____
Alfalfa - brome hay @ \$85.00 per ton	0.4 tons	34.00	0.3 tons	25.50	_____
Pasture @ \$35.00 per acre	0.2 acres	7.00	0.3 acres	10.50	_____
Pasture fert, misc @ \$20.00 per acre	0.2 acres	4.00	0.3 acres	6.00	_____
Total Feed Costs		\$95.00		\$79.00	\$ _____
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 @ 9%	6 months	5.09	6 months	4.37	_____
Labor @ \$14.00 per hour	5 hours	70.00	3 hours	42.00	_____
<b>Total Variable Costs</b>		\$188.09		\$143.37	\$ _____
<b>Income over Variable Costs</b>		\$ _____		\$ _____	\$ _____
<b>Fixed Costs</b>					
Machinery, equipment, housing, fencing		\$15.40		\$14.93	\$ _____
Interest, insurance on breeding flock @ 10%		15.90		15.90	_____
Ram replacement		5.60		5.60	_____
<b>Total Fixed Costs</b>		\$36.90		\$36.43	\$ _____
<b>Total of All Costs</b>		\$224.99		\$179.80	\$ _____
<b>Income over All Costs</b>		\$ _____		\$ _____	\$ _____
Break-even selling price for variable costs per lb <sup>b/</sup>		\$1.13		\$0.79	\$ _____
Break-even selling price for all costs per lb <sup>b/</sup>		\$1.37		\$1.01	\$ _____

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

<sup>b/</sup> Assumes cull ewe income of \$8.00 and wool income of \$4.50 (early) or \$5.50 (late) per unit.

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## Ewe Flock Investment

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### 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,	minus cull value,	divided by ewes,	divided by number of years	
\$350.00	\$70.00	25 ewes	2 years	\$5.60 per unit

### 3. Facilities and machinery investment (150 ewes) (replacement cost)

	<b><u>Early Lambing</u></b>	<b><u>Late Lambing</u></b>
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

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## Feeder Lamb — One Head

			<b>Your Farm</b>
<b>Income</b>			
Lamb (125 lbs x \$ _____/lb)		\$ _____	\$ _____
Wool (3 lbs x \$ _____/lb)		\$ _____	\$ _____
<b>Gross Income</b>		\$ _____	\$ _____
<b>Variable Costs</b>			
Feeder cost @ \$0.95 per lb	70 lbs	\$66.50	\$ _____
Interest @ 9%	100 days	1.64	_____
Feed Costs			
Corn @ \$3.50 per bushel	290 lbs	\$18.13	\$ _____
Supplement & minerals @ \$0.15 per lb	32 lbs	4.80	_____
Alfalfa - brome hay @ \$85.00 per ton	35 lbs	1.49	_____
Total Feed Costs		\$24.41	\$ _____
Veterinary, medical, shearing		\$5.00	\$ _____
Machinery and equipment		1.00	_____
Marketing, miscellaneous		2.00	_____
Interest on variable costs @ 9%	60 days	0.48	_____
Death loss		1.68	_____
Labor @ \$14.00 per hour	1.0 hours	14.00	_____
<b>Total Variable Costs</b>		\$116.71	\$ _____
<b>Income over Variable Costs</b>		\$ _____	\$ _____
<b>Fixed Costs</b>			
Machinery, equipment, housing		\$3.50	\$ _____
<b>Total of All Costs</b>		\$120.21	\$ _____
<b>Income over All Costs</b>		\$ _____	\$ _____
Break-even selling price for variable costs per lb <sup>a/</sup>		\$0.93	\$ _____
Break-even selling price for all costs per lb <sup>a/</sup>		\$0.96	\$ _____

<sup>a/</sup> Assumes wool income of \$3.00 per head and death loss of 2%.

## Lamb Feed Requirements

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

<u>Beginning Wt. of Feeder, lb</u>	<u>Corn</u>		<u>Supplement (32-36%), lb</u>	<u>Hay lb</u>	<u>Days on Feed</u>	<u>Lb feed per lb of gain</u>
	<u>Bu</u>	<u>Lb</u>				
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

<u>Beginning Wt. of Feeder, lb</u>	<u>Lb feed per lb of gain</u>	<u>Complete Feed-pelleted (lb)</u>	<u>Time on Feed</u>	
			<u>Days</u>	<u>Portion of year</u>
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

<u>Beginning Wt. of Feeder, lb</u>	<u>Mainly Corn and Supplement Rations</u>			<u>Time on Feed</u>	
	<u>Roughage</u>	<u>Grain</u>	<u>Supplement</u>	<u>Days</u>	<u>Portion of year</u>
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

	<u>20,000 lb of milk per cow annually</u>		<u>24,000 lb of milk per cow annually</u>		<u>Your Farm</u>
<b>Income</b>					
Milk sales (\$ _____/cwt) <sup>a/</sup>	200 cwt	\$ _____	240 cwt	\$ _____	\$ _____
Cull cow (\$ _____/lb)	0.36 hd @ 1,350 lb	\$ _____	0.39 hd @ 1,400 lb	\$ _____	\$ _____
Dairy calf (\$ _____/hd)	0.51 head	\$ _____	0.52 head	\$ _____	\$ _____
Replacement heifer (\$ _____/hd)	0.18 head	\$ _____	0.21 head	\$ _____	\$ _____
<b>Gross Income</b>		\$ _____		\$ _____	\$ _____
<b>Variable Costs</b>					
Feed Costs					
Corn equivalents @ \$3.50 per bushel	104 bu	\$364.00	113 bu	\$395.50	\$ _____
Corn Silage @ \$32.00 per ton	8.0 tons	256.00	8.0 tons	256.00	_____
Hay equivalents @ \$125.00 per ton	6.1 tons	762.50	6.0 tons	750.00	_____
Salts and minerals <sup>b/</sup>	242 lbs @ \$0.14/lb	33.88	323 lbs @ \$0.13/lb	41.99	_____
Protein supplement @ \$0.10 per lb	1,285 lbs	128.50	1,855 lbs	185.50	_____
Cottonseed @ \$0.09 per lb	725 lbs	65.25	1,361 lbs	122.49	_____
Fat @ \$0.30 per lb	26 lbs	7.80	111 lbs	33.30	_____
Milk replacer, calf starter		90.00		90.00	_____
<b>Total Feed Costs</b>		\$1,707.93		\$1,874.78	\$ _____
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 @ 9%	3 months	50.44	3 months	55.63	_____
Labor @ \$14.00 per hour	70 hours	980.00	70 hours	980.00	_____
<b>Total Variable Costs</b>		\$3,272.37		\$3,508.01	\$ _____
<b>Income over Variable Costs</b>		\$ _____		\$ _____	\$ _____
<b>Fixed Costs</b>					
Machinery, equipment, facilities		\$520.00		\$520.00	\$ _____
Interest, insurance on herd @ 10%		239.00		276.30	_____
<b>Total Fixed Costs</b>		\$759.00		\$796.30	\$ _____
<b>Total of All Costs</b>		\$4,031.37		\$4,304.31	\$ _____
<b>Income over All Costs</b>		\$ _____		\$ _____	\$ _____
Income from animal sales		\$300.00		\$320.00	\$ _____
Break-even selling price for variable costs per cwt		\$14.86		\$13.28	\$ _____
Break-even selling price for all costs per cwt		\$18.66		\$16.60	\$ _____

<sup>a/</sup> 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.

<sup>b/</sup> Salt and mineral packages vary in the rations for different levels of production.

## Dairy Investment

### 1. Breeding herd investment per cow unit

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

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

	<b><u>20,000 lb</u></b>	<b><u>24,000 lb</u></b>
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
Deprec., int., taxes, ins. @ 14% annually	\$520	\$520

### 3. Feed requirements per cow unit

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