



## **Livestock Farm Management Update**

**February 20, 2002**

Prepared By Rodney Jones, Associate Professor / Extension Livestock Production Economist,  
Kansas State University, February 20, 2002.

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## **Cattle Production Budgets and Returns**

**By Rodney Jones, Extension Livestock Production Economics**

Based on this month's traditional cattle finishing budgets for 750 pound steers and 650 pound heifers, the expected break-even prices for February placements have decreased once again relative to projections of the previous few months. The projected break-evens, for cattle expected to finish in about July, are in the \$70.00 to \$70.50 per cwt. range for steers and heifers. Average traditional weight feeder cattle prices remain weak relative to a few months ago. Feed ingredient prices declined over the past month, and performance expectations improve significantly for cattle placed later in the winter relative to fall placements. Feed conversions and average daily gains of February placed cattle are expected to be 2% to 4% better than annual averages, and improve even more for later spring placements.

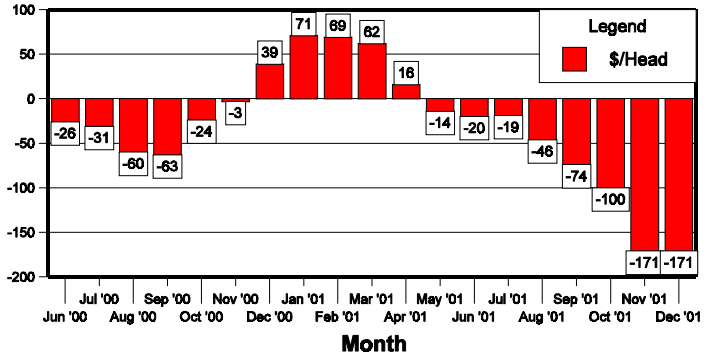
Combining the ration charge projection with February placement performance expectations results in a feeding cost of gain projection of \$44.97 per cwt. for traditional weight February steer placements, and \$48.14 per cwt. for traditional weight February heifer placements. These estimates represent significant declines relative to the estimates of just a few months ago. The feeding cost of gain estimates depicted in the accompanying budgets are based on current feed prices and seasonal average performance. In addition to feed ingredients, yardage, processing, medication, and death loss are accounted for. Estimates are sensitive to changes in feed conversions, daily gains, grain prices, and hay prices. Feed conversions, grain prices, and hay prices are positively related to feeding cost of gains. Based on winter performance estimates, each \$0.10 per bushel change in corn price changes feeding cost of gain by \$1.40 per cwt. Each \$10.00 per ton change

in hay prices changes feeding cost of gain by \$0.55 per cwt. Feeding cost of gain changes by \$0.53 per cwt. for each 0.10 pound change in feed conversions and \$0.08 per cwt. for each 0.10 pound change in daily gains. With continued low feed ingredient prices, the feeding cost of gain projection will continue to decline into the spring placement months due to improving performance expectations.

Calculated losses on December finished cattle came in even worse than previously projected. The average December steer closeout returned about \$-171.00 per head, compounding similar losses in November and large losses throughout the fall of 2001. Current estimates suggest average returns of \$-127.00 per head on January closeouts, and average February finished cattle could lose between \$70.00 and \$75.00 per head. Current projections suggest that losses in March will be more manageable, averaging around \$25.00 per head. Current futures based price forecasts suggest that April prices have a good chance of being above break-even levels, resulting in improved returns to cattle feeding by later in the spring. Current average break-even's are around \$77.00 per cwt., but will decline to around \$74.00 by April.

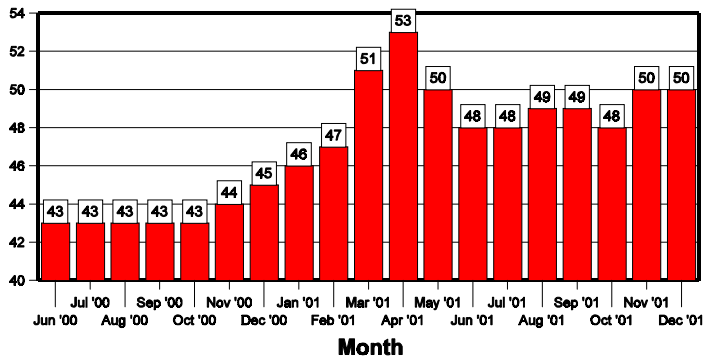
As mentioned last month, tax preparation season provides an opportunity to carefully scrutinize all cattle enterprises from an economic perspective. Producers desiring assistance in evaluating the production and economic performance of their cattle enterprise, and comparisons with benchmarks in order to identify bottlenecks to profitability, can contact me through their local county extension office to find out more.

### Monthly Returns for Finishing 700 to 800 Lb. Steers in Kansas



Source: KSU Cattle Return Series.

### Monthly Feeding Cost of Gain 700 to 800 Lb. Steers in Kansas



Source: KSU Cattle Return Series.

**Commercial Feedlot Cattle Finishing Budget**  
**February 2002 Placements (750 lb steers, 650 lb hfrs)**

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>1</sup>	\$83.69	\$82.07
Interest rate	8.5%	8.5%
Ration charge (\$/ton) <sup>2</sup>	\$100.54	\$100.54
Yardage charge	\$0.05	\$0.05
Beginning weight	750 lbs.	650 lbs.
Pay weight	1250 lbs.	1075 lbs.
Gain	500 lbs.	425 lbs.
Days on feed	149 days	149 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	3.35 lbs.	2.86 lbs.
Feed conversion (as fed)	7.94 lbs.	8.41 lbs.
Death loss (in conversion)	0.50%	0.50%
<b>Cost Budgets</b>	<b>Steers</b>	<b>Heifers</b>
<b>Feeder</b>		
1. Cost of feeder:	\$627.68	\$533.46
2. Interest on feeder:	\$ 21.82	\$ 18.46
<b>Feed</b>		
3. Total feed cost:	\$199.57	\$179.67
4. Interest on feed:	\$ 3.47	\$ 3.11
<b>Other Costs</b>		
5. Yardage Charge:	\$ 7.46	\$ 7.43
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .37	\$ .37
Breakeven selling price:	\$ 69.95	\$ 70.37
Total cost of gain/cwt:	\$ 49.34	\$ 52.48
Feeding cost of gain/cwt: <sup>3</sup>	\$ 44.97	\$ 48.14

<sup>1</sup>Feeder steer and heifer prices based on recent auction results at Winter Auction, Dodge City, Kansas.

<sup>2</sup>Ration charge of \$100.54 based on corn price of \$2.24/bu., milo price of \$3.34/cwt., alfalfa hay price of \$97.50/ton, supplement price of \$177.50/ton, and feed markup of \$20/ton. Corn price change of \$0.10/bu. changes ration cost \$1.80/ton. Milo price change of \$0.10/cwt. changes ration cost \$0.70/ton. Alfalfa hay price change of \$10/ton changes ration cost \$1.20/ton. Supplement price change of \$25/ton changes ration cost \$0.75/ton.

<sup>3</sup>Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 750 lb. Steers

	Feeder purchase price				
	\$79.00	\$81.00	\$83.00	\$85.00	\$87.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$43.00	66.25	67.49	68.73	69.97	71.21
\$44.00	66.65	67.89	69.13	70.37	71.61
\$45.00	67.05	68.29	69.53	70.77	72.01
\$46.00	67.45	69.69	69.93	71.17	72.41
\$47.00	67.85	69.09	70.33	71.57	72.81
\$48.00	68.25	69.49	70.73	71.97	73.21
\$50.00	68.65	69.89	71.13	72.37	73.61

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

	Feeder purchase price				
	\$78.00	\$80.00	\$82.00	\$84.00	\$86.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$46.00	66.98	68.23	69.48	70.73	71.99
\$47.00	67.38	68.63	69.88	71.13	72.38
\$48.00	67.77	69.02	70.27	71.53	72.78
\$49.00	68.17	69.42	70.67	71.92	73.17
\$50.00	68.56	69.81	71.06	72.32	73.57
\$51.00	68.96	70.21	71.46	72.71	73.96
\$52.00	69.35	70.60	71.86	73.11	74.36

**FEEDING COST OF GAIN FOR STEERS BY CLOSEOUT MONTH (\$/cwt.)**

	% Change Previous Year	2002	2001	2000	1990-2000 Average
January		51.00 <sup>P</sup>	46.44	43.11	53.49
February		52.00 <sup>P</sup>	46.97	43.76	55.45
March		52.00 <sup>P</sup>	50.69	44.97	55.96
April		51.00 <sup>P</sup>	52.64	44.55	54.70
May		49.50 <sup>P</sup>	50.08	43.29	53.42
June			48.20	43.20	51.56
July	+12.6		48.42	43.01	50.29
August	+12.5		48.88	43.43	52.04
September	+13.2		48.77	43.10	51.07
October	+10.5		47.78	43.24	51.68
November	+13.5		49.98	44.05	51.84
December	+10.9		49.52	44.65	52.05

Source: Focus on Feedlots Newsletter, KSU Extension Animal Science and Cooperating Feedyards.

**BREAKEVEN PRICES FOR FINISHING 700 TO 800 LB. STEERS (\$/cwt.)**

	% Change Previous Year	2001	2000	1990-2000 Average
January		76.65 <sup>P</sup>	72.93	65.68
February		76.85 <sup>P</sup>	72.93	67.47
March		76.47 <sup>P</sup>	74.90	68.15
April		73.88 <sup>P</sup>	76.74	69.61
May		71.80 <sup>P</sup>	76.16	71.27
June			74.85	71.72
July	+ 3.5		72.47	69.99
August	+ 5.4		73.48	69.69
September	+ 6.5		74.39	69.82
October	+ 6.1		74.20	69.92
November	+ 6.8		77.46	72.56
December	+ 3.9		76.46	73.62

<sup>P</sup> Values for this month are projected

## Hog Production Budgets and Returns

The hog finishing budget projects the economic outcome of taking a 10 pound early weaned pig through a combination nursery and finishing phase. The total feeding time is projected to be 170 days, so pigs started in February would be expected to finish in August. Ten pound weaned pigs are priced into the nursery using a formula based on current milo prices, current soybean meal prices, and 6 month out hog futures prices. The calculated price for 10 lb. pigs in February decreased somewhat from last month's calculation, to \$33.76 per pig. The decrease is due to the lower 6 month out hog futures price. Average Iowa direct weaned pig transfer prices increased slightly over the past month, and are significantly above the formula price. Alternative budget projections and sensitivity tables are included to assess the impact of alternative weaned pig prices on break-even projections.

The projected sale price needed to cover all costs associated with finishing formula priced early weaned pigs started on feed in February is \$42.14 per cwt. on a live weight basis, a reduction relative to the projection of last month. Pricing the weaned pig into the nursery-finish program at the mid-point of the recent Iowa reported cash transfer price (\$41.50) results in a projected break-even to cover all costs of \$45.61 per cwt. Clearly, optimism regarding future finished hog prices is working its way into the bids for early weaned pigs in some cash transfer markets.

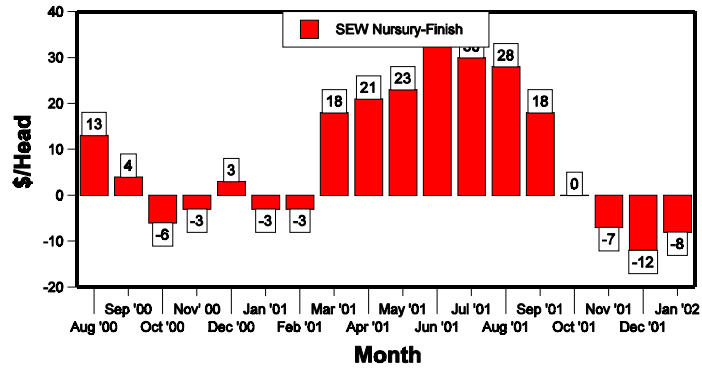
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at

\$16.79 per cwt. of pork produced in the SEW nursery finish program. This is a significant decrease from the feed cost projections of the last few months. Feed costs are sensitive to changes in milo and soybean meal prices. For example, a milo price change of \$0.10 per cwt. changes feed costs per cwt. by \$0.22. A soybean meal price change of \$10 per ton changes feed costs by \$0.28 per cwt. Both soybean meal prices and milo prices have decreased somewhat over the past month, resulting in the lowered feed cost projections.

Calculated average returns to labor and management remained negative for hogs exiting Kansas SEW nursery-finishing barns in December and January. Returns to labor and management averaged about \$-11.56 per pig for hogs finished in December, and averaged around \$-8.16 per pig for hogs finished in January. Current estimates suggest slightly positive returns to labor and management in February, with further improving returns into the spring. With break-even prices to cover all costs for average producers in the \$40.50 to \$41.00 per cwt. range on a live weight basis for the next few months, returns to labor and management could average in the \$5.00 to \$15.00 per pig finished range for average nursery-finish producers..

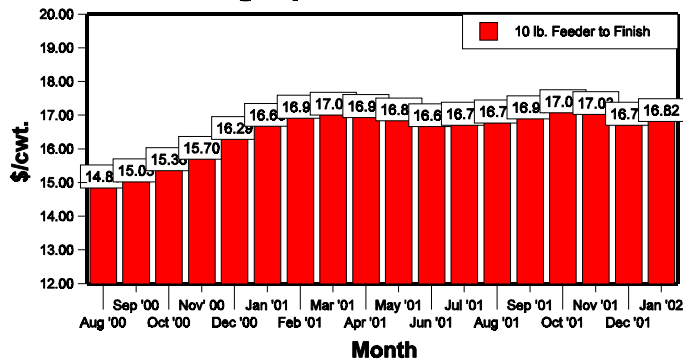
Declining feed costs have reduced projected break-evens for average Kansas farrow-to-finish producers to under \$41.50 per cwt. on a live basis for early 2002. This improvement, coupled with improved hog prices, should allow farrow-to-finish producers to earn modest profits early in 2002.

### Returns to Labor and Management Finishing Operations in Kansas



Source: KSU Swine Return Series.

### Feed Costs Per Cwt. SEW Nursery Finishing Operations in Kansas



Source: KSU Swine Return Series.

SEW NURSERY- FINISHING BUDGET

February, 2002

Assumptions	Barrows and Gilts
Initial weight of weaned pig	10 lbs.
Cost of weaned pig <sup>1</sup>	\$33.76
Interest rate	9.0 %
Feed conversion	3.00 lbs.
Death loss	5.00 %
Milo price	\$3.34 / cwt.
Soybean meal price	\$152.50 / ton.

<sup>1</sup> Weaned pig prices based on KSU formula.

COST BUDGET FOR FINISHING PIGS

<b>FEEDER</b>	
1. Cost of weaned pig	\$33.76
2. Interest on weaned pig	\$ 1.42
<b>FEED</b>	
3. Grain	\$16.72
4. Soybean meal	\$ 9.84
5. Vitamins and minerals	\$ 8.41
6. Starter	\$ 2.45
7. Interest on feed	\$ 0.78
<b>OTHER VARIABLE COSTS</b>	
8. Feed processing	\$ 2.99
9. Labor	\$ 2.88
10. Veterinary, drugs, and supplies	\$ 1.30
11. Utilities	\$ 0.50
12. Repairs	\$ 1.57
13. Miscellaneous	\$ 3.25
14. Interest on other variable costs	\$ 0.26
<b>FIXED COSTS</b>	
15. Buildings and equipment	\$11.97
Sale Price Needed to Cover Variable Costs	\$37.00
Sale Price Needed to Cover Total Costs	\$42.14
Feed Cost Per Cwt. of Pork Produced	\$16.79

SEW Nursery-Finishing

Sensitivity Analysis of Break-even Sale Price

	Purchase Price for 10 Lb. Weaned Pig				
	\$30.00	\$32.00	\$34.00	\$36.00	\$38.00
Feed Cost Per Cwt.	Break-even Sale Price for Market Hog (\$/cwt.)				
\$14.00	37.75	38.64	39.54	40.44	41.33
\$15.00	38.73	39.62	40.52	41.41	42.31
\$16.00	39.70	40.60	41.49	42.39	43.68
\$17.00	40.68	41.57	42.47	43.36	44.26
\$18.00	41.65	42.55	43.44	44.34	45.23
\$19.00	42.63	43.52	44.42	45.32	46.21
\$20.00	43.61	44.50	45.40	46.29	47.19

SEW Nursery-Finishing

Sensitivity Analysis of Maximum Weaned Pig Price

	Expected Sale Price for Market Hogs				
	\$42.00	\$44.00	\$46.00	\$48.00	\$50.00
Feed Cost Per Cwt.	Maximum Purchase Price for 10 lb. Weaned Pig				
\$14.00	39.49	43.96	48.43	52.89	57.36
\$15.00	37.31	41.78	46.25	50.71	55.18
\$16.00	35.13	39.60	44.07	48.53	53.00
\$17.00	32.95	37.42	41.89	46.35	40.82
\$18.00	30.77	35.24	39.71	44.17	48.64
\$19.00	28.59	33.06	37.53	41.99	46.46
\$20.00	26.41	30.88	35.35	39.81	44.28