



## **Livestock Farm Management Update**

**March 5, 2001**

Prepared By Rodney Jones, Assistant Professor / Extension Livestock Production Economist,  
Kansas State University, March 5, 2001.

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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 late February placements decreased somewhat from the projections of the previous month. The projected break-evens, for cattle expected to finish in about July, are in the \$72.75 to \$73.75 per cwt. range for heifers and steers. Feeder cattle prices are, on average, consistent with last month. Feed ingredient prices inched up, however performance expectations for February placements improve significantly. Both feed conversions and average daily gains of February placed cattle are expected to be 3% to 4% better than the annual average.

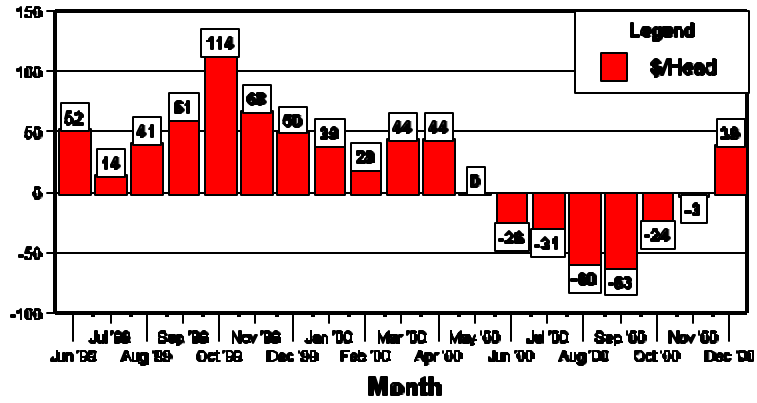
Cash feedgrain prices increased slightly from last month, and hay prices remain high, as concerns regarding hay supplies continue. The estimated ration charge increased nearly 5% relative to last month, following a significant decline two months ago. Combining the ration charge projection with February placement performance expectations results in a feeding cost of gain projection of \$47.59 per cwt. for February steer placements, and \$50.18 per cwt. for February heifer placements. The feeding cost of gain estimates depicted in the accompanying budgets are based on current feed prices and seasonal average performance, and are consistent with "futures based" feeding cost of gain projections that assume feed is purchased as needed throughout the feeding period. 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 \$1.36 per cwt. Each \$10.00 per ton change in hay prices changes feeding cost of gain by \$0.54 per cwt. Feeding cost of gain changes by \$0.56 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. The past few months have provided opportunities to price feedgrain needs on market dips. Risk averse feeders may take advantage of feedgrain pricing opportunities this spring to protect against the possibility of a summer feedgrain price rally.

Profits returned to cattle feeding on December closeouts. For example, the average December steer closeout in Kansas generated a profit of about \$39.39 per head. The positive returns resulted from an average break-even price of \$73.62 combined with a monthly average selling price of \$76.73. Preliminary estimates suggest strong profits on early 2001 closeouts, averaging in the \$60 to \$70 per head range. Break-evens on current closeouts are around \$73.50 to \$74.50 per cwt., with selling prices topping \$80.00. Profits are expected to decline by summer, as futures based price forecasts are suggesting significant declines in fed cattle prices.

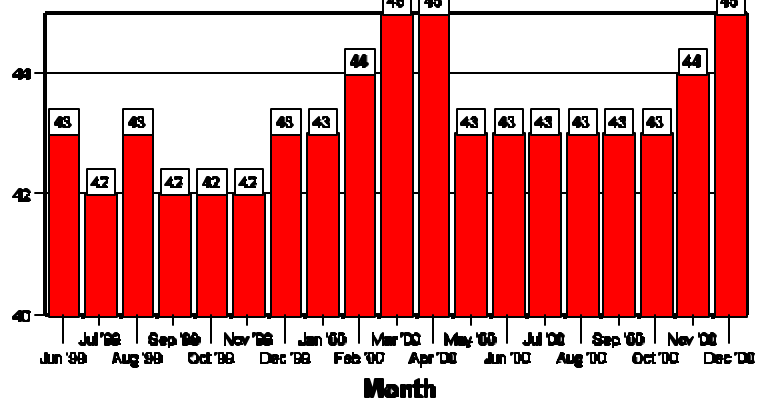
A complete analysis of summer stocker profit potential will be included next month. Stocker operators are aggressively bidding for steer calves, possibly to the point of eroding any profit potential from the summer grazing enterprise.

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



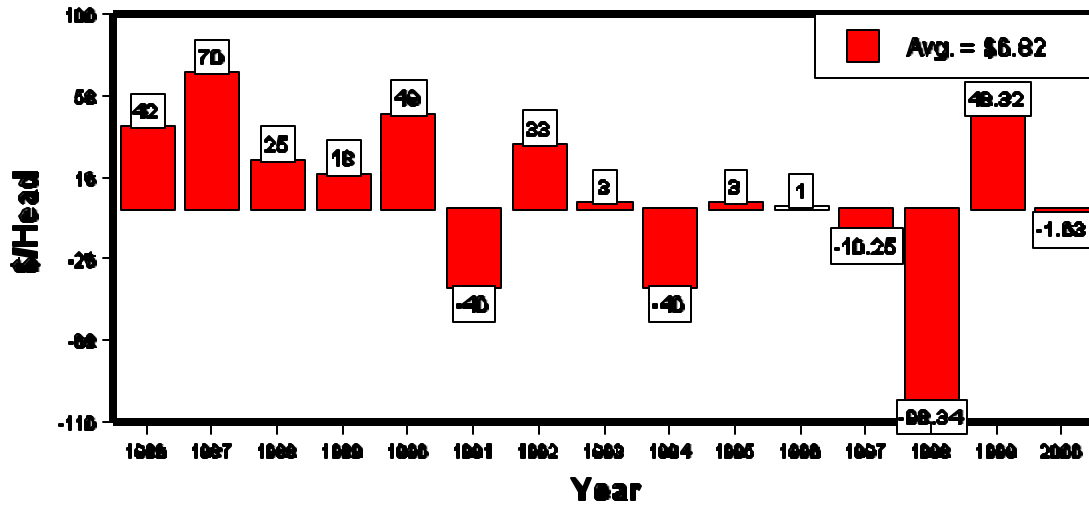
Source: KSU Cattle Return Series.

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



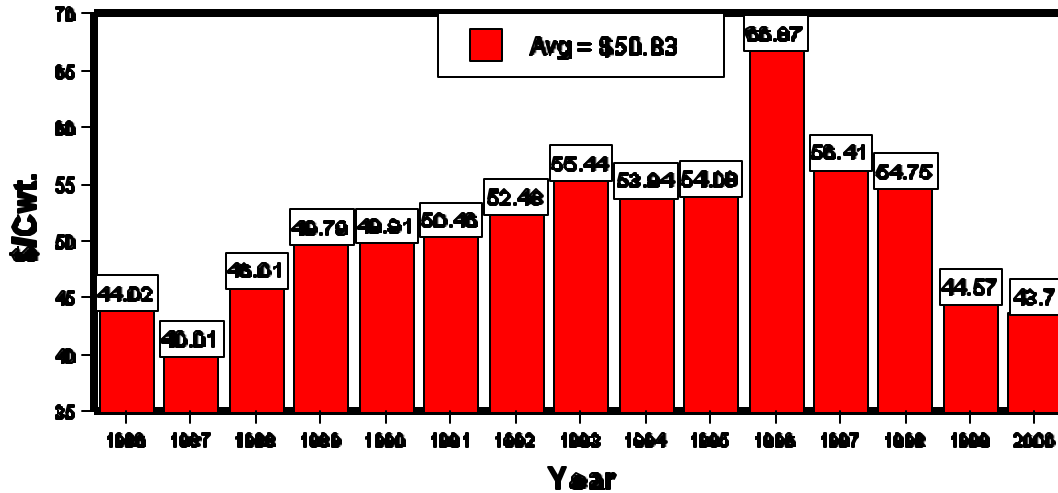
Source: KSU Cattle Return Series.

## Annual Net Return for Finishing 700 to 800 Lb. Steers in Kansas



Source: KSU Cattle Return Series.

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



Source: KSU Cattle Return Series.

**Commercial Feedlot Cattle Finishing Budget**  
**February 2001 Placements (750 lb steers, 650 lb hfrs)**

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>1</sup>	\$87.50	\$84.25
Interest rate	9.8%	9.8%
Ration charge (\$/ton) <sup>2</sup>	\$107.38	\$107.38
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	150 days	145 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	3.34 lbs.	2.94 lbs.
Feed conversion (as fed)	7.89 lbs.	8.24 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:	\$656.25	\$547.63
2. Interest on feeder:	\$ 26.24	\$ 21.15
<b>Feed</b>		
3. Total feed cost:	\$211.80	\$188.02
4. Interest on feed:	\$ 4.23	\$ 3.63
<b>Other Costs</b>		
5. Yardage Charge:	\$ 7.49	\$ 7.23
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .43	\$ .41
Breakeven selling price:	\$ 73.64	\$ 72.75
Total cost of gain/cwt:	\$ 52.84	\$ 55.16
Feeding cost of gain/cwt: <sup>3</sup>	\$ 47.59	\$ 50.18

<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 \$107.38 based on corn price of \$2.32/bu., milo price of \$3.73/cwt., alfalfa hay price of \$120.00/ton, supplement price of \$178.50/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				
	\$83.00	\$85.00	\$87.00	\$89.00	\$91.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$46.00	70.19	71.44	72.69	73.94	75.18
\$47.00	70.59	71.84	73.09	74.34	75.58
\$48.00	70.99	72.24	73.49	74.74	75.98
\$59.00	71.39	72.64	73.89	75.14	76.38
\$50.00	71.99	73.04	74.29	75.54	76.78
\$51.00	72.19	73.44	74.69	75.94	77.18
\$52.00	72.59	73.84	75.09	76.34	77.58

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

	Feeder purchase price				
	\$82.00	\$84.00	\$86.00	\$88.00	\$90.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$49.00	70.87	72.12	73.38	74.64	75.89
\$50.00	71.26	72.52	73.78	75.03	76.29
\$51.00	71.66	72.91	74.17	75.43	76.68
\$52.00	72.05	73.31	74.57	75.82	77.08
\$53.00	72.45	73.71	74.96	76.22	77.47
\$54.00	72.84	74.10	75.36	76.61	77.87
\$55.00	73.24	74.50	75.75	77.01	78.26

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

	% Change Previous Year	2001	2000	1999	1990-1999 Average
January		47.00 <sup>P</sup>	43.11	47.65	53.10
February		49.50 <sup>P</sup>	43.76	47.94	55.35
March		50.50 <sup>P</sup>	44.97	47.66	55.99
April		50.00 <sup>P</sup>	44.55	47.94	53.86
May		49.00 <sup>P</sup>	43.29	45.56	53.26
June		48.00 <sup>P</sup>	43.20	42.62	51.19
July		48.50 <sup>P</sup>	43.01	42.30	50.24
August			43.43	43.15	50.82
September	+ 1.6		43.10	42.41	51.09
October	+ 2.4		43.24	42.19	51.15
November	+ 4.8		44.05	42.04	51.69
December	+ 3.0		44.65	43.37	52.48

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	1999	1990-1999 Average
January		73.13 <sup>P</sup>	65.68	61.92	72.34
February		73.70 <sup>P</sup>	67.47	60.39	72.48
March		74.08 <sup>P</sup>	68.15	61.51	72.03
April		74.92 <sup>P</sup>	69.61	61.63	71.63
May		75.77 <sup>P</sup>	71.27	59.71	71.28
June		74.76 <sup>P</sup>	71.72	62.21	69.67
July		74.06 <sup>P</sup>	69.99	63.05	69.67
August			69.69	61.90	68.61
September	+13.9		69.82	61.29	68.48
October	+15.2		69.92	60.70	68.68
November	+12.1		72.56	64.73	70.52
December	+13.2		73.62	65.02	71.26

<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 late February remained about the same as last month, at \$33.70 per pig. The formula pig price is about \$3.00 per pig lower than the mid point of the recent reported Iowa direct weaned pig transfer 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 \$43.12 per cwt. on a live weight basis, consistent with last month's projection. Pricing the weaned pig into the nursery-finish program at the mid-point of the recent Iowa reported cash transfer price (\$36.65) results in a projected break-even to cover all costs of \$44.45 per cwt. As has been the case in recent months both the formula price and the traded market weaned pig price are yielding modest profits for farrowing operators..

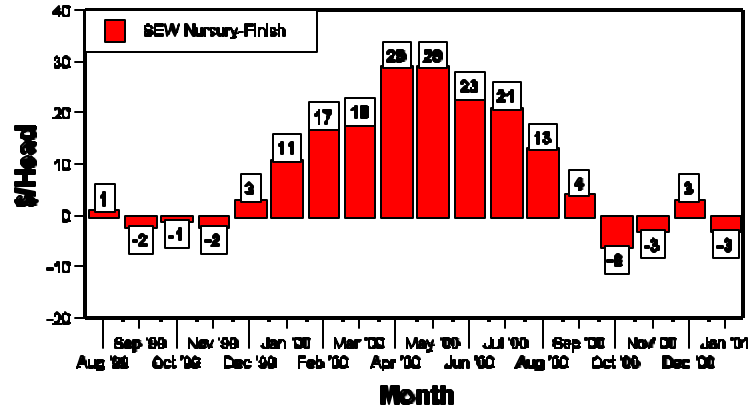
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at \$17.70 per cwt. of pork produced in the SEW nursery finish program.

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. Milo prices inched up last month, while soybean meal prices continued to decline. The relatively cheap feed ingredient prices might be viewed as a "window of opportunity" to price future feed ingredient needs at attractive values. Producers may especially want to consider pricing summer feed needs on market dips.

Calculated average returns to labor and management returned to negative territory for hogs exiting Kansas SEW nursery-finish barns in January, averaging about -\$3.11 per head. Preliminary indications suggest more positive returns for February and March. Break-even prices to cover all costs for average producers are currently around \$40.00 per cwt. on a live weight basis, with recent cash prices rebounding to above this level.

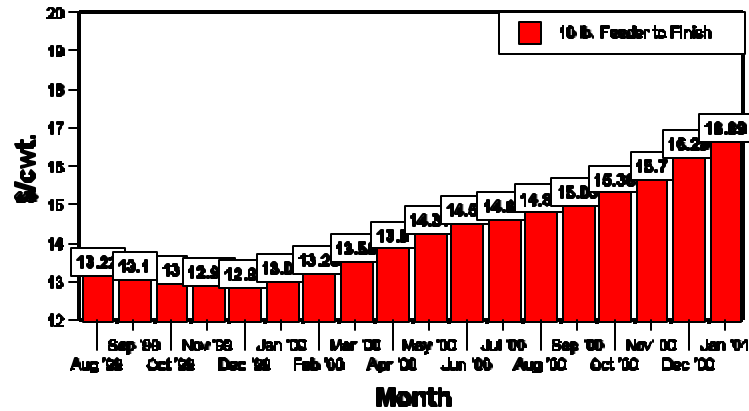
Break-evens to cover all costs for average farrow-to-finish producers will likely average around \$42.00 per cwt. on a live weight basis for first quarter 2001 production. At current prices, average Kansas producers are enjoying modest profits.

## 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, 2001

Assumptions	Barrows and Gilts
Initial weight of weaned pig	10 lbs.
Cost of weaned pig <sup>1</sup>	\$33.70
Interest rate	10.0 %
Feed conversion	3.00 lbs.
Death loss	5.00 %
Milo price	\$3.73 / cwt.
Soybean meal price	\$153.50 / ton.

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

### COST BUDGET FOR FINISHING PIGS

#### FEEDER

1. Cost of weaned pig	\$33.70
2. Interest on weaned pig	\$ 1.57

#### FEED

3. Grain	\$18.67
4. Soybean meal	\$ 9.90
5. Vitamins and minerals	\$ 8.41
6. Starter	\$ 2.45
7. Interest on feed	\$ 0.92

#### OTHER VARIABLE COSTS

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	\$ 0.29

#### FIXED COSTS

15. Buildings and equipment	\$11.97
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Sale Price Needed to Cover Variable Costs	\$37.98
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Sale Price Needed to Cover Total Costs	\$43.12
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Feed Cost Per Cwt. of Pork Produced	\$17.70
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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.)				
\$16.00	39.81	40.71	41.61	42.51	43.41
\$17.00	40.79	41.69	42.59	43.49	44.38
\$18.00	41.77	42.67	43.56	44.46	45.36
\$19.00	42.74	43.64	44.54	45.44	46.34
\$20.00	43.72	44.62	45.52	46.42	47.32
\$21.00	44.70	45.60	46.50	47.40	48.30
\$22.00	45.68	46.58	47.48	48.38	49.28

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				
\$16.00	34.88	39.35	43.78	48.24	52.69
\$17.00	32.70	37.17	41.60	46.06	50.51
\$18.00	30.52	34.99	39.42	43.88	48.33
\$19.00	28.34	32.81	37.24	41.70	46.15
\$20.00	26.16	30.63	35.06	39.52	43.97
\$21.00	23.98	28.45	32.88	37.34	41.79
\$22.00	21.80	26.27	30.70	36.16	39.61