



## **Livestock Farm Management Update**

**September 30, 2001**

Prepared By Rodney Jones, Associate Professor / Extension Livestock Production Economist,  
Kansas State University, September 30, 2001.

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*Hog price declines, and therefore producer profit declines, over the next several months may not be as dramatic as earlier projected. Low cost feed ingredients continue to benefit hog producers..... 9*

## **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 September placements declined somewhat from the projections of the previous few months. The projected break-evens, for cattle expected to finish in about February, are in the \$73.50 to \$75.00 per cwt. for steers and heifers. Feeder cattle prices have declined somewhat as fed cattle prices have fallen. Feed ingredient prices remained essentially unchanged from last month. Performance expectations decline quickly as we get into the early fall months. Feed conversions and average daily gains of September placed cattle are expected to be about 6% worse than annual averages, and remain below annual averages for October placements as well. The budget projections and sensitivity tables included in the following pages reveal that 550 lb. calves placed directly in a calf finishing program in early October have a projected break-even around \$76.00 per cwt. based on recent calf prices.

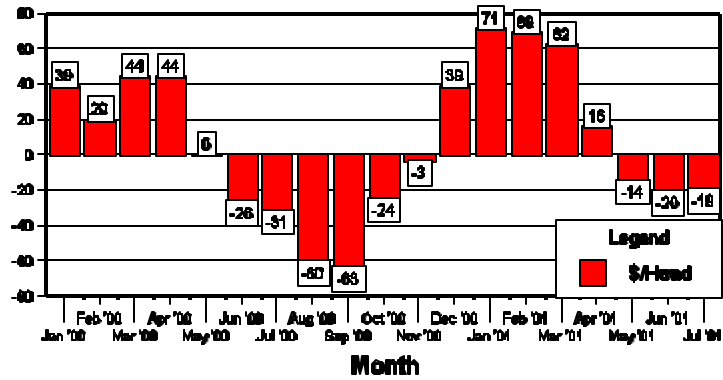
Combining the ration charge projection with September placement performance expectations results in a feeding cost of gain projection of \$52.08 per cwt. for traditional weight September steer placements, and \$54.69 per cwt. for traditional weight September heifer placements. The feeding cost of gain 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 Fall performance estimates, each \$0.10 per bushel change in corn price changes feeding cost of gain by \$1.24 per cwt. Each \$10.00 per ton change in hay prices changes feeding cost of gain by \$0.50 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. The significant increase (about 8.5%) in the feeding cost of gain projections relative to recent months, is due primarily to the lower performance expectations.

Losses to cattle feeders in July and August came in about as expected. Kansas cattle finishers suffered an average return of \$-19.21 per head on July steer closeouts, and preliminary estimates suggest average returns of \$-40.00 to \$-50.00 per head on August closeouts. The dramatic decline in fed cattle prices during late September will show up in later fall cattle feeding returns. Losses are currently averaging in the \$85.00 to \$100.00 per head range, and will continue to be severe through early next year unless prices recover. These projections are based on current average break-even's that are above \$75.00 per cwt., increasing to around \$77.00 per cwt. by years end.

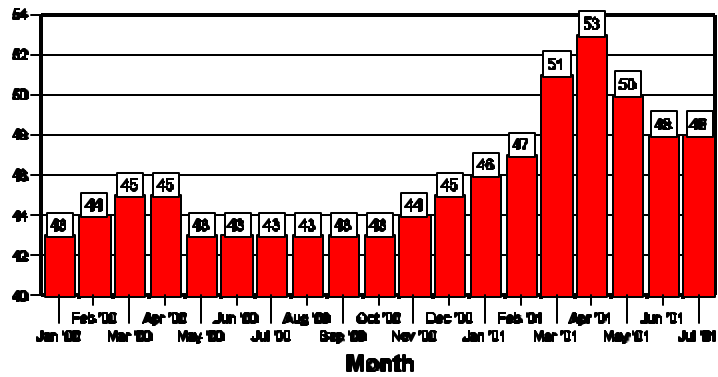
The recent declines in fed cattle prices have worked down through feeder cattle and calf markets as well. In spite of this fact, break-evens for cattle backgrounding and finishing programs are still, on average, well above futures based price forecasts late in the winter and next spring. This suggests that calf and feeder cattle prices may decline further unless fed cattle cash and futures prices rebound quickly. Backgrounders and feeders will not place cattle with "locked in" losses of these magnitudes for very long. The hope is, of course, that fed cattle prices recover at least some of the recent declines fairly quickly so further adjustments in feeder cattle and calf prices are not a necessary response. Producers should, however, be aware that continued weakness in fed cattle prices will result in further price declines at other levels of the cattle marketing chain, cutting into cow-calf and summer stocker profits.

### 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**  
**September 2001 Placements (750 lb steers, 650 lb hfrs)**

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>1</sup>	\$85.00	\$84.50
Interest rate	9.0%	9.0%
Ration charge (\$/ton) <sup>2</sup>	\$106.12	\$106.12
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	162 days	158 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	3.09 lbs.	2.69 lbs.
Feed conversion (as fed)	8.79 lbs.	9.14 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:	\$637.50	\$549.25
2. Interest on feeder:	\$ 25.44	\$ 21.40
<b>Feed</b>		
3. Total feed cost:	\$233.20	\$206.11
4. Interest on feed:	\$ 4.65	\$ 4.01
<b>Other Costs</b>		
5. Yardage Charge:	\$ 8.09	\$ 7.90
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .44	\$ .43
Breakeven selling price:	\$ 73.87	\$ 74.71
Total cost of gain/cwt:	\$ 57.16	\$ 59.73
Feeding cost of gain/cwt: <sup>3</sup>	\$ 52.08	\$ 54.69

<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 \$106.12 based on corn price of \$2.35/bu., milo price of \$3.57/cwt., alfalfa hay price of \$110.00/ton, supplement price of \$194.70/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				
	\$81.00	\$83.00	\$85.00	\$87.00	\$89.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$49.00	70.14	71.39	72.63	73.88	75.13
\$50.00	70.54	71.79	73.03	74.28	75.53
\$51.00	70.94	72.19	73.43	74.68	75.93
\$52.00	71.34	72.59	73.83	75.08	76.33
\$53.00	71.74	72.99	74.23	75.48	76.73
\$54.00	72.14	73.39	74.63	75.88	77.13
\$55.00	72.54	73.79	75.03	76.28	77.53

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

	Feeder purchase price				
	\$80.00	\$82.00	\$84.00	\$86.00	\$88.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$52.00	70.81	72.07	73.33	74.58	75.84
\$53.00	71.21	72.47	73.72	74.98	76.24
\$54.00	71.61	72.86	74.12	75.37	76.63
\$55.00	72.00	73.26	74.51	75.77	77.03
\$56.00	72.40	73.65	74.91	76.17	77.42
\$57.00	72.79	74.05	75.30	76.56	77.82
\$58.00	73.19	74.44	75.70	76.96	78.21

**Commercial Feedlot Calf Finishing Budget**  
**Late September 2001 Placements (550 lb steers, 550 lb hfrs)**

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>4</sup>	\$99.00	\$91.00
Interest rate	9.0%	9.0%
Ration charge (\$/ton) <sup>5</sup>	\$106.12	\$106.12
Yardage charge	\$0.05	\$0.05
Beginning weight	550 lbs.	550 lbs.
Pay weight	1200 lbs.	1100 lbs.
Gain	650 lbs.	550 lbs.
Days on feed	253 days	233 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	2.57 lbs.	2.36 lbs.
Feed conversion (as fed)	8.80 lbs.	9.20 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:	\$544.50	\$500.50
2. Interest on feeder:	\$ 33.96	\$ 31.32
<b>Feed</b>		
3. Total feed cost:	\$303.50	\$268.49
4. Interest on feed:	\$ 9.46	\$ 8.40
<b>Other Costs</b>		
5. Yardage Charge:	\$ 12.65	\$ 11.65
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .83	\$ .80
Breakeven selling price:	\$ 76.58	\$ 75.92
Total cost of gain/cwt:	\$ 57.60	\$ 60.85
Feeding cost of gain/cwt: <sup>6</sup>	\$ 52.38	\$ 55.15

<sup>4</sup>Steer and heifer calf prices based on recent auction results at Winter Auction, Dodge City, Kansas.

<sup>5</sup>Ration charge of \$106.12 based on corn price of \$2.35/bu., milo price of \$3.57/cwt., alfalfa hay price of \$110.00/ton, supplement price of \$194.70/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>6</sup>Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 550 lb. Steer Calves

	Feeder purchase price				
	\$95.00	\$97.00	\$99.00	\$101.00	\$103.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$49.00	72.80	73.77	74.75	75.72	76.69
\$50.00	73.34	74.31	75.29	76.26	77.24
\$51.00	73.88	74.86	75.83	76.80	77.78
\$52.00	74.42	75.40	76.37	77.35	78.32
\$53.00	74.97	75.94	76.91	77.89	78.86
\$54.00	75.51	76.48	77.45	78.43	79.40
\$55.00	76.05	77.02	78.00	78.97	79.94

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 550 lb. Heifer Calves

	Feeder purchase price				
	\$87.00	\$89.00	\$91.00	\$93.00	\$95.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$52.00	72.22	73.28	74.35	75.41	76.47
\$53.00	72.72	73.78	74.85	75.91	76.97
\$54.00	73.22	74.28	75.35	76.41	77.47
\$55.00	73.72	74.78	75.85	76.91	77.97
\$56.00	74.22	75.28	76.35	77.41	78.47
\$57.00	74.72	75.78	76.85	77.91	78.97
\$58.00	75.22	76.28	77.35	78.41	79.47

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

	% Change Previous Year	2001	2000	1999	1990-1999 Average
January	+ 7.7	46.44	43.11	47.65	53.10
February	+ 7.3	46.97	43.76	47.94	55.35
March	+12.7	50.69	44.97	47.66	55.99
April	+18.2	52.64	44.55	47.94	53.86
May	+15.7	50.08	43.29	45.56	53.26
June	+11.6	48.20	43.20	42.62	51.19
July	+12.6	48.42	43.01	42.30	50.24
August		48.00 <sup>P</sup>	43.43	43.15	50.82
September		48.00 <sup>P</sup>	43.10	42.41	51.09
October		48.00 <sup>P</sup>	43.24	42.19	51.15
November		49.00 <sup>P</sup>	44.05	42.04	51.69
December		50.00 <sup>P</sup>	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	+11.0	72.93	65.68	61.92	72.34
February	+ 8.1	72.93	67.47	60.39	72.48
March	+ 9.9	74.90	68.15	61.51	72.03
April	+10.2	76.74	69.61	61.63	71.63
May	+ 6.9	76.16	71.27	59.71	71.28
June	+ 4.4	74.85	71.72	62.21	69.67
July	+ 3.5	72.47	69.99	63.05	69.67
August		73.61 <sup>P</sup>	69.69	61.90	68.61
September		74.93 <sup>P</sup>	69.82	61.29	68.48
October		75.12 <sup>P</sup>	69.92	60.70	68.68
November		77.18 <sup>P</sup>	72.56	64.73	70.52
December		76.81 <sup>P</sup>	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 September would be expected to finish in March of 2002. 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 September decreased slightly from last month, to \$30.53 per pig. In addition, Iowa direct weaned pig transfer prices decreased somewhat over the past month, and are currently at levels consistent with 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 late September is \$41.80 per cwt. on a live weight basis, about the same as 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 (\$30.00) results in a similar projected break-even to cover all costs of \$41.56 per cwt.

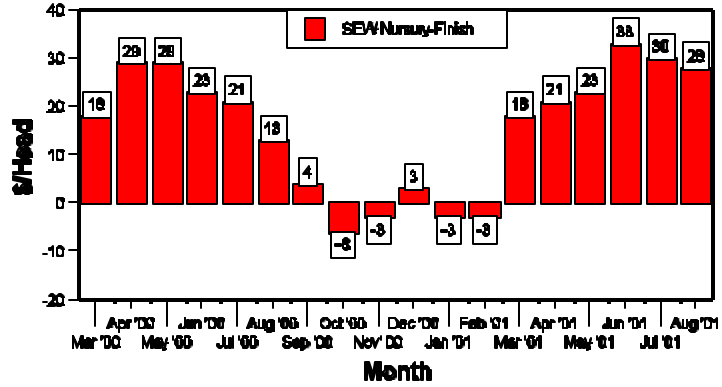
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at \$17.81 per cwt. of pork produced in the SEW nursery finish program. This is an increase from the feed

cost projection of last month. 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. Soybean meal prices have increased slightly over the past month, resulting in the higher feed cost projection, and ultimately in the higher break-even projections.

Calculated average returns to labor and management remained very positive for hogs exiting Kansas SEW nursery-finishing barns in August, averaging about \$28.27 per head. Returns are expected to remain positive, but decline over the next few months. Break-even prices to cover all costs for average producers are expected to be in the \$41.00 to \$42.50 per cwt. range on a live weight basis for the next several months. Current projections suggest that returns above all costs may turn slightly negative by the end of the year.

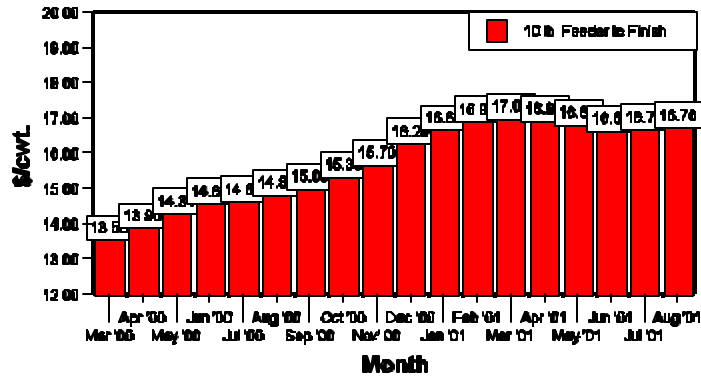
The profitability outlook for Hog producers in all phases of the industry is somewhat more favorable now than a few weeks ago. Current projections suggest that supplies may not increase as quickly or as dramatically as earlier anticipated. Furthermore, unlike cattle prices, hog prices have not declined dramatically in the past few weeks in response to concerns about the overall economy and other factors related to recent tragic events.

## 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

September, 2001

Assumptions	Barrows and Gilts
Initial weight of weaned pig	10 lbs.
Cost of weaned pig <sup>1</sup>	\$30.53
Interest rate	10.0 %
Feed conversion	3.00 lbs.
Death loss	5.00 %
Milo price	\$3.57 / cwt.
Soybean meal price	\$169.70 / ton.

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

COST BUDGET FOR FINISHING PIGS

FEEDER

1. Cost of weaned pig	\$30.53
2. Interest on weaned pig	\$ 1.42

FEED

3. Grain	\$17.87
4. Soybean meal	\$ 10.95
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	\$36.66
Sale Price Needed to Cover Total Costs	\$41.80

Feed Cost Per Cwt. of Pork Produced	\$17.81
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SEW Nursery-Finishing

Sensitivity Analysis of Break-even Sale Price

	Purchase Price for 10 Lb. Weaned Pig				
	\$28.00	\$30.00	\$32.00	\$34.00	\$36.00
Feed Cost Per Cwt.	Break-even Sale Price for Market Hog (\$/cwt.)				
\$16.00	38.91	39.81	40.71	41.61	42.51
\$17.00	39.89	40.79	41.69	42.59	43.49
\$18.00	40.87	41.77	42.67	43.56	44.46
\$19.00	41.84	42.74	43.64	44.54	45.44
\$20.00	42.82	43.72	44.62	45.52	46.42
\$21.00	43.80	44.70	45.60	46.50	47.40
\$22.00	44.78	45.68	46.58	47.48	48.38

SEW Nursery-Finishing

Sensitivity Analysis of Maximum Weaned Pig Price

	Expected Sale Price for Market Hogs				
	\$38.00	\$40.00	\$42.00	\$44.00	\$46.00
Feed Cost Per Cwt.	Maximum Purchase Price for 10 lb. Weaned Pig				
\$16.00	25.98	30.44	34.90	39.34	43.78
\$17.00	23.80	28.26	32.72	37.16	41.60
\$18.00	21.62	26.08	30.54	34.98	39.42
\$19.00	19.44	23.90	28.36	32.80	37.24
\$20.00	17.26	21.72	26.18	30.62	35.06
\$21.00	15.08	19.54	24.00	28.44	32.88
\$22.00	12.90	17.36	21.82	26.26	30.70