



## **Livestock Farm Management Update**

**December 10, 2001**

Prepared By Rodney Jones, Associate Professor / Extension Livestock Production Economist,  
Kansas State University, December 10, 2001.

### **In This Issue....**

*Huge financial losses continue in cattle feeding. Calf prices recover in response to modest moisture in some wheat pasture areas..... 2*

*After an extended period of modest profits, hog producers begin to suffer economic losses..... 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 November placements increased relative to projections of the previous few months. The projected break-evens, for cattle expected to finish in about April, are in the \$74.50 to \$75.00 per cwt. for steers and heifers. Average traditional weight feeder cattle prices remain strong in the face of large feedlot losses. Feed ingredient prices are consistent with month ago levels, and performance expectations remain at seasonal lows placements. Feed conversions and average daily gains of November placed cattle are expected to be about 8% worse than annual averages, and remain below annual averages for December placements as well.

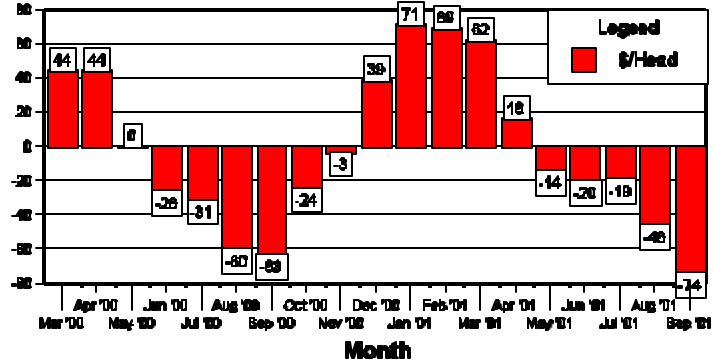
Combining the ration charge projection with late November placement performance expectations results in a feeding cost of gain projection of \$52.51 per cwt. for traditional weight November steer placements, and \$54.36 per cwt. for traditional weight November heifer placements. The feeding cost of gain 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 late Fall 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. Feeding cost of gain projections are higher for late fall placements due primarily to the lower performance expectations.

Severe financial losses continue to accrue to Kansas cattle finishers. The average September steer closeout returned about \$-74.33 per head, and losses have worsened significantly in October and November. Preliminary estimates suggest average returns of \$-110.00 to \$-140.00 per head on October and November closeouts. Losses here in early December could average in the \$130.00 to \$150.00 per head range, and feeders will continue to suffer severe losses through early next year unless prices recover more than current futures based price forecasts suggest. Current average break-even's are around \$76.50 per cwt., and will remain high for the next several months based on average feeder cattle purchase prices late in the summer.

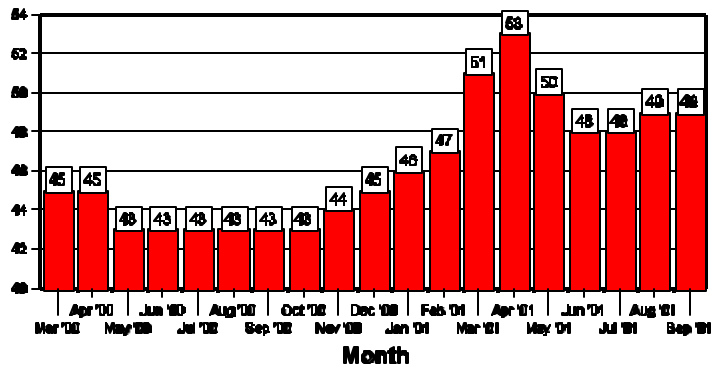
Moisture in some southern wheat pasture regions has resulted in calf market strength in spite of the severe feedlot financial losses and relatively weak futures based price forecasts. Consistent with the past few months, budget projections and sensitivity tables are included to project break-evens for calf finishing programs. Break-even projections have increased significantly from last month due to higher calf prices going into the program. The budgets currently suggest that 550 lb. Calves placed directly into a calf finishing program in early December have a projected break-even around \$73.50 to \$74.50 per cwt. These calves would be expected to finish around July of 2002.

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

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>1</sup>	\$86.18	\$85.07
Interest rate	9.0%	9.0%
Ration charge (\$/ton) <sup>2</sup>	\$105.49	\$105.49
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	166 days	162 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	3.01 lbs.	2.63 lbs.
Feed conversion (as fed)	8.91 lbs.	9.12 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:	\$646.35	\$552.96
2. Interest on feeder:	\$ 26.47	\$ 22.03
<b>Feed</b>		
3. Total feed cost:	\$234.98	\$204.44
4. Interest on feed:	\$ 4.81	\$ 4.07
<b>Other Costs</b>		
5. Yardage Charge:	\$ 8.31	\$ 8.08
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .46	\$ .44
Breakeven selling price:	\$ 74.83	\$ 74.98
Total cost of gain/cwt:	\$ 57.81	\$ 59.55
Feeding cost of gain/cwt: <sup>3</sup>	\$ 52.51	\$ 54.36

<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 \$105.49 based on corn price of \$2.34/bu., milo price of \$3.50/cwt., alfalfa hay price of \$115.00/ton, supplement price of \$175.70/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				
	\$82.00	\$84.00	\$86.00	\$89.00	\$90.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$49.00	70.82	72.06	73.31	74.56	75.81
\$50.00	71.22	72.46	73.71	74.96	76.21
\$51.00	71.62	72.86	74.11	75.36	76.61
\$52.00	72.02	73.26	74.51	75.76	77.01
\$53.00	72.42	73.66	74.91	76.16	77.41
\$54.00	72.82	74.06	75.31	76.56	77.81
\$55.00	73.22	74.46	75.71	76.96	78.21

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

	Feeder purchase price				
	\$81.00	\$83.00	\$85.00	\$87.00	\$89.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$52.00	71.49	72.74	74.00	75.26	76.52
\$53.00	71.88	73.14	74.40	75.65	76.91
\$54.00	72.28	73.53	74.79	76.05	77.31
\$55.00	72.67	73.93	75.19	76.44	77.70
\$56.00	73.07	74.33	75.58	71.84	78.10
\$57.00	73.46	74.72	75.98	77.24	78.49
\$58.00	73.86	75.12	76.37	77.63	78.89

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

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) <sup>4</sup>	\$98.25	\$89.63
Interest rate	9.0%	10.0%
Ration charge (\$/ton) <sup>5</sup>	\$105.49	\$105.49
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	235 days	226 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	2.77 lbs.	2.43 lbs.
Feed conversion (as fed)	8.11 lbs.	8.92 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:	\$540.38	\$492.97
2. Interest on feeder:	\$ 31.27	\$ 29.96
<b>Feed</b>		
3. Total feed cost:	\$278.05	\$258.77
4. Interest on feed:	\$ 8.04	\$ 7.86
<b>Other Costs</b>		
5. Yardage Charge:	\$ 11.73	\$ 11.32
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$ .74	\$ .77
Breakeven selling price:	\$ 73.68	\$ 74.15
Total cost of gain/cwt:	\$ 52.90	\$ 58.67
Feeding cost of gain/cwt: <sup>6</sup>	\$ 48.09	\$ 53.22

<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 \$105.49 based on corn price of \$2.34/bu., milo price of \$3.50/cwt., alfalfa hay price of \$115.00/ton, supplement price of \$175.70/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				
	\$94.00	\$96.00	\$94.00	\$100.00	\$102.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$46.00	70.49	71.46	72.43	73.40	74.37
\$47.00	71.03	72.00	72.97	73.94	74.91
\$48.00	71.58	72.55	73.52	74.49	75.45
\$49.00	72.12	73.09	74.06	75.03	76.00
\$50.00	72.66	73.63	74.60	75.57	76.54
\$51.00	73.20	74.17	75.14	76.11	77.08
\$52.00	73.74	74.71	75.68	76.65	77.62

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 550 lb. Heifer Calves

	Feeder purchase price				
	\$86.00	\$88.00	\$90.00	\$92.00	\$94.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$49.00	70.11	71.17	72.23	73.30	74.36
\$50.00	70.61	71.67	72.73	73.80	74.86
\$51.00	71.11	72.17	73.23	74.30	75.36
\$52.00	71.61	72.67	73.73	74.80	75.86
\$53.00	72.11	73.17	74.23	75.30	76.36
\$54.00	72.61	73.67	74.73	75.80	76.86
\$55.00	73.11	74.17	75.23	76.30	77.36

**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	+12.5	48.88	43.43	43.15	50.82
September	+13.2	48.77	43.10	42.41	51.09
October		48.00 <sup>P</sup>	43.24	42.19	51.15
November		48.50 <sup>P</sup>	44.05	42.04	51.69
December		49.50 <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	+ 5.4	73.48	69.69	61.90	68.61
September	+ 6.5	74.39	69.82	61.29	68.48
October		75.12 <sup>P</sup>	69.92	60.70	68.68
November		76.98 <sup>P</sup>	72.56	64.73	70.52
December		76.61 <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 November would be expected to finish in May 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 November increased somewhat from last month, to \$34.51 per pig. Iowa direct weaned pig transfer prices also increased over the past month, and remain 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 late November is \$42.90 per cwt. on a live weight basis, up considerably from 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 (\$38.00) results in a projected break-even to cover all costs of \$44.47 per cwt. Our projections indicate that average weaned pig producers need nearly \$31.00 per 10 lb. Pig to cover all costs, so both formula prices and average reported market transfer prices are generating small profits for average weaned pig producers.

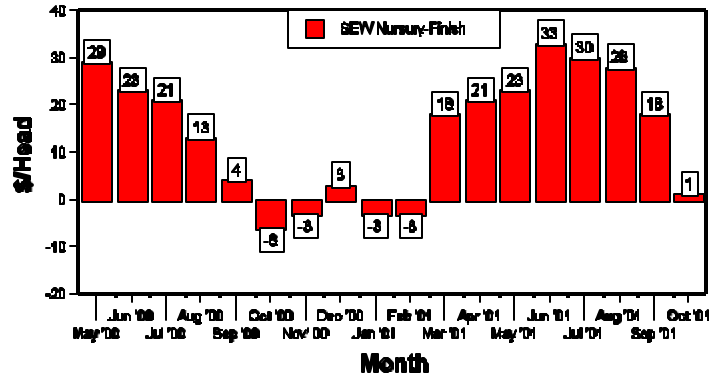
The example hog finishing budgets are calculated using a milo based feeding ration. Projected feed costs, based on current milo and supplement prices, are currently at

\$17.10 per cwt. of pork produced in the SEW nursery finish program. This is a 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. Soybean meal prices have decreased somewhat over the past month, resulting in the lower feed cost projections.

Calculated average returns to labor and management declined dramatically for hogs exiting Kansas SEW nursery-finishing barns in October and November. Returns to labor and management averaged less than \$1.00 per pig for hogs finished in October, and turned significantly negative in November. Break-even prices to cover all costs for average producers are expected to be in the \$40.00 to \$41.50 per cwt. range on a live weight basis for the next several months. Combining these break-even projections with futures based price forecasts indicates that nursery-finish producers may suffer modest losses relative to total costs for the next few months.

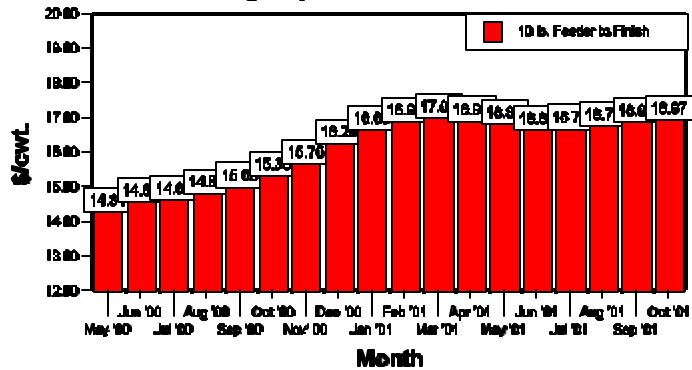
In the near term average farrow-to-finish producers will likely suffer modest losses relative to total costs, but most producers should be able to cover variable costs of production at current prices. Our projections suggest current break-evens to cover all costs around \$41.50 per cwt. on a live weight basis

## 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

November, 2001

Assumptions	Barrows and Gilts
Initial weight of weaned pig	10 lbs.
Cost of weaned pig <sup>1</sup>	\$34.51
Interest rate	10.0 %
Feed conversion	3.00 lbs.
Death loss	5.00 %
Milo price	\$3.50 / cwt.
Soybean meal price	\$150.70 / ton.

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

COST BUDGET FOR FINISHING PIGS

FEEDER

1. Cost of weaned pig	\$34.51
2. Interest on weaned pig	\$ 1.61

FEED

3. Grain	\$17.52
4. Soybean meal	\$ 9.72
5. Vitamins and minerals	\$ 8.41
6. Starter	\$ 2.45
7. Interest on feed	\$ 0.89

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	\$37.75
Sale Price Needed to Cover Total Costs	\$42.90

Feed Cost Per Cwt. of Pork Produced	\$17.10
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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.)				
\$15.00	38.83	39.73	40.69	41.53	42.43
\$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

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				
\$15.00	37.07	41.50	45.94	50.40	54.84
\$16.00	34.89	39.32	43.76	48.22	52.66
\$17.00	32.71	37.14	41.58	46.04	50.48
\$18.00	30.53	34.96	39.40	43.86	48.30
\$19.00	28.35	32.78	37.22	41.68	46.12
\$20.00	26.17	30.60	35.04	39.50	43.94
\$21.00	23.99	28.42	32.86	37.32	41.76