



Livestock Farm Management Update

July 31 2002

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Kansas State University, July 31, 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 late July placements have increased once again relative to the projections of last month. The projected break-evens, for cattle expected to finish in about December, are in the \$67.50 to \$68.50 per cwt. range for heifers and steers. Average traditional weight feeder cattle prices continue to increase, now averaging in the upper \$70's. This is somewhat surprising considering the huge equity losses in cattle feeding over the past year, and the feed price uncertainty this summer. The overall ration charge projection has increase again, up slightly from last month's projection. The performance expectations of mid summer placements are quite good, with both feed conversions and average daily gains expected to be 3% to 5% better than annual averages.

Combining the ration charge projection with late July placement performance expectations results in a feeding cost of gain projection of \$48.37 per cwt. for traditional weight July steer placements, and \$50.42 per cwt. for traditional weight July heifer placements. The feeding cost of gain estimates depicted in the accompanying budgets are based on current feed prices and seasonal average performance. Alternative projections based on use-weighted futures based price projections for feed ingredients yield somewhat higher feeding cost of gain estimates. 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. To illustrate the risk associated with feed price

uncertainty, each \$0.10 per bushel change in corn price changes feeding cost of gain by \$1.24 per cwt. In addition, each \$10.00 per ton change in hay price changes feeding cost of gain by \$0.49 per cwt.

The average May steer closeout returned about \$-85.00 per head, adding to the continuous period of severe financial losses that has now lasted well over a year. Preliminary estimates suggest average returns of \$-75.00 to \$-90.00 per head for June through August closeouts. Returns are expected to improve in the fall, however, unless fed cattle prices improve more than futures based price forecasts would suggest average returns could remain somewhat negative through the rest of the year.

Producers across Kansas are being forced to make difficult cattle management decisions due to drought conditions. Many have already, or are considering earlier than normal weaning of calves. Cattlemen are then faced with tough choices regarding their best options for both the cows and the calves. In situations where crop residue and other low cost fall and winter forage is in very short supply, managers need to carefully scrutinize the cow ownership decision. Typical annual feed costs including summer pasture run \$240 to \$275 per cow. Based on recent feed ingredient prices, drylot and other supplemental feeding strategies though the fall and winter could easily push annual feeding costs to well over \$300, or even much higher. Cost increases of this magnitude will place even the most efficient operations in an annual operating loss situation for the cow-calf enterprise. Producers who are considering withstanding these financial losses and

maintaining the cow herd in hopes of increased cow values later, or several years of sustained high calf prices in the future need to understand the risks involved, and the factors that must fall into place to make this strategy work. Drought conditions must improve to reduce cow maintenance costs in future years (commercial producers cannot afford abnormally high cow maintenance costs for multiple years). Calf prices must remain strong for several years into the future to make up for losses sustained by high cow maintenance costs over the next year. Finally, producers must be willing to “pull the trigger” and sell cows in the future if cow values do rebound to abnormally high levels (commercial producers simply cannot afford to have \$1000.00 cows in the herd). On a related topic, producers who elect to sell cows now need to avoid the temptation to “restock” with abnormally high priced breeding stock over the next few years if drought conditions improve.

With regard to the early weaned calf, options include selling immediately at weaning, keeping the calves for a short time period, or retaining ownership of the calves in a backgrounding or other feeding program. With very few exceptions where there is a known market willing to pay the full cost of a brief “straightening out” phase, short term ownership programs after weaning are difficult to make pay. Therefore, for most producers the realistic options to consider include selling the calves at weaning, or retaining ownership for an extended feeding program. Feeding program possibilities in drought stricken areas are assumed to be limited to various dry-lot backgrounding or finishing combinations due to the lack of available grazable forages. Based on average cost (current Western Kansas feed ingredient prices) and average animal performance projections, Table 1. reveals the potential outcomes for retaining ownership of some various weights of

calves. These projected outcomes can then be compared to local sale prices for early weaned calves.

The “A” program represents a 150 day backgrounding program (A1) for light (400 - 425 lb.) steer calves, followed by a finishing phase (A2) in a commercial feedlot. The outcome does not change significantly if we start the program with an even lighter steer calf, or a heifer calf. Similarly, the “B” program represents a 115 day backgrounding program (B1) for a heavier (500 lb.) steer calf, followed by a finishing phase (B2) in a commercial feedlot. The “C” example projects the outcome of sending the 500 - 525 lb. calf directly to the feedlot, targeting rapid gains from the beginning.

Beginning values are based on recent sale reports for steer calves at the time of this writing (or expected price projections in the case of A2 and B2). Expected selling prices are based on late July futures quotes for the relevant marketing time adjusted by historical basis levels. As you can see, for all backgrounding and finishing retained ownership options illustrated, the projected break-even is considerably higher than the expected sale price, resulting in substantial projected losses for each program relative to selling the calves now. Calf prices have remained relatively strong in the face of rising feedgrain and hay prices. Producers in other regions of the country have been blessed with sufficient moisture heightening the prospects for fall and winter grazing (wheat pasture in Oklahoma and Texas, cool season pastures in the Southeast, etc.) These programs result in lower cost-of-gain projections than drylot confined feeding programs in drought stricken geographic regions, justifying higher prices for calves that can be shipped to those areas. In addition, there are apparently a significant number of calf and feeder cattle buyers who believe futures based price forecasts for early 2003 cattle prices are “too low”,

resulting in higher bids for feeder cattle and calves. Assuming average performance, and recent feed ingredient values, the beginning calf value going into the A1 program would have to be lowered by \$6.50 per cwt. in order to project a positive return, for example. Alternatively, the expected selling price for the 725 lb. feeder steers coming out of the A1 program would need to be increased by \$4.25 per cwt. to project a positive return. If that same animal is carried through the finishing phase, the final selling price would need to be \$3.00 per cwt. higher than projected in order to generate a positive return. Similar price “advantages” would need to be realized in order to make the other example ownership programs economically attractive.

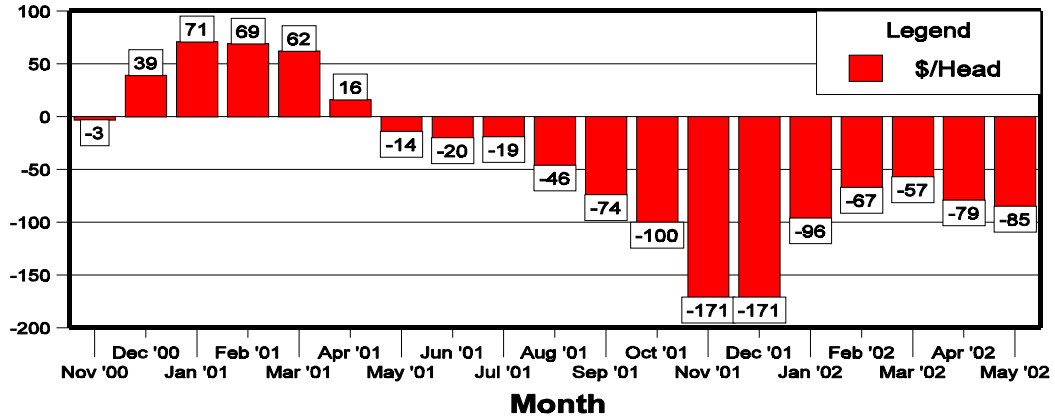
In short, it is very difficult to project positive returns to any “confined” feeding program for these calves. Losses similar to those projected in Table 1. result from budget projections for most possible ownership programs.

With this said, there are always exceptions to blanket recommendations. Producers with quality grazable forages available (crop residues, irrigated wheat or other cool season forages, etc.) can lower projected cost-of-gains considerably. Some producers may have an abundance of silage available (due to salvaging a drought stressed crop, for example) with a very low “opportunity value”. Unlike grains and most hay crops, once silage is put up it is fairly expensive to transport, and may be difficult to sell to others at an attractive market price. These types of feed resources can be priced into cattle ownership budget projections at lower values, and may result in more attractive economic outcomes. Producers need to make their own comparisons using their own realistic cost projections, current calf prices, and timely price projections. Timely livestock marketing and management information can be found at www.agecon.ksu.edu/livestock. Spreadsheet templates to help producers develop budget projections can be found at www.agecon.ksu.edu/rdjones.

Table 1. Cost-Return projections for retained ownership of early weaned calves.

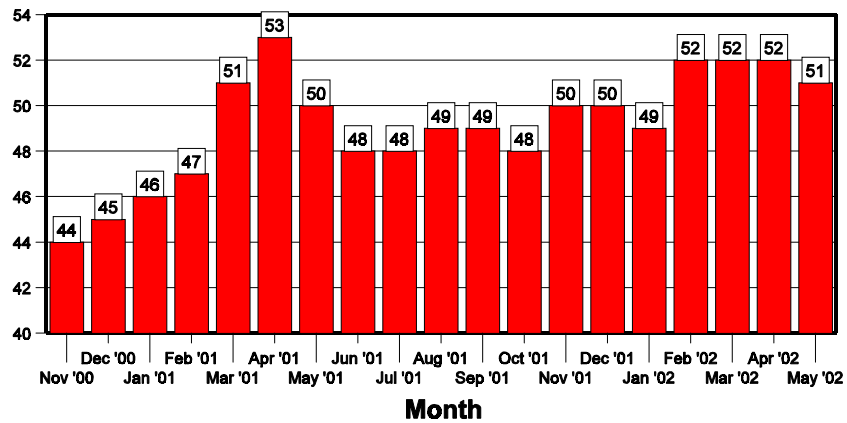
Program		Starting Weight	Beginning Value	Ending Weight	Breakeven Selling Price	Expected Selling Price	Return \$/hd.
A1	2 lb. ADG, 150 d	425	\$ 95.00	725	\$82.24	\$77.75	(\$31.94)
A2	Comm Feedlot	725	\$77.75	1145	\$69.31	\$66.31	(\$34.14)
B1	2 lb. ADG, 115 d	525	\$87.00	755	\$80.83	\$77.48	(\$25.04)
B2	Comm Feedlot	755	\$77.48	1179	\$69.63	\$67.27	(\$27.69)
C1	Comm Feedlot	525	\$87.00	1143	\$72.17	\$69.51	(\$30.03)

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
July 2002 Placements (750 lb steers, 650 lb hfrs)

Assumptions	Steers	Heifers
Cost of feeder (\$/cwt.) ¹	\$79.00	\$76.00
Interest rate	8.5%	8.5%
Ration charge (\$/ton) ²	\$108.88	\$108.88
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	144 days	138 days
Shrink	4.0%	4.0%
Pay weight to pay weight:		
average daily gain	3.47 lbs.	3.07 lbs.
Feed conversion (as fed)	7.96 lbs.	8.21 lbs.
Death loss (in conversion)	0.50%	0.50%
Cost Budgets	Steers	Heifers
Feeder		
1. Cost of feeder:	\$592.50	\$494.00
2. Interest on feeder:	\$ 19.88	\$ 15.93
Feed		
3. Total feed cost:	\$216.68	\$189.96
4. Interest on feed:	\$ 3.64	\$ 3.06
Other Costs		
5. Yardage Charge:	\$ 7.20	\$ 6.92
6. Processing Charge:	\$ 7.00	\$ 7.00
8. Vet, drugs, supplies:	\$ 7.00	\$ 7.00
9. Interest on other V.C.:	\$.36	\$.34
Breakeven selling price:	\$ 68.34	\$ 67.37
Total cost of gain/cwt:	\$ 52.35	\$ 54.17
Feeding cost of gain/cwt: ³	\$ 48.37	\$ 50.42

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

²Ration charge of \$108.88 based on corn price of \$2.46/bu., milo price of \$3.72/cwt., alfalfa hay price of \$104.00/ton, supplement price of \$210.00/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.

³Excludes interest on feeder.

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 750 lb. Steers

	Feeder purchase price				
	\$75.00	\$77.00	\$79.00	\$81.00	\$83.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$45.00	61.51	65.75	66.99	68.23	69.47
\$46.00	64.91	66.15	67.39	68.63	69.87
\$47.00	65.31	66.55	67.79	69.03	70.27
\$48.00	65.71	66.95	68.19	69.43	70.67
\$49.00	66.11	67.35	68.59	69.83	71.07
\$50.00	66.51	67.75	68.99	70.23	71.47
\$51.00	66.91	68.15	69.39	70.63	71.87

Commercial Feedlot

Sensitivity Analysis of Breakeven Prices for 650 lb. Heifers

	Feeder purchase price				
	\$72.00	\$74.00	\$76.00	\$78.00	\$80.00
Feeding Cost of Gain (\$/cwt.)	-----Breakeven Price----- (\$/cwt.)				
\$47.00	63.52	64.77	66.02	67.26	68.51
\$48.00	63.92	65.16	66.41	67.66	68.91
\$49.00	64.31	65.56	66.81	68.06	69.30
\$50.00	64.71	65.95	67.20	68.45	69.70
\$51.00	65.10	66.35	67.60	68.85	70.09
\$52.00	65.50	66.74	67.99	69.24	70.49
\$53.00	65.89	67.14	68.39	69.64	70.89

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

	% Change Previous Year	2002	2001	2000	1990-2000 Average
January	+ 5.6	49.08	46.44	43.11	53.49
February	+11.0	52.12	46.97	43.76	55.45
March	+ 3.1	52.24	50.69	44.97	55.96
April	- 1.4	51.99	52.64	44.55	54.70
May	+ 1.0	50.58	50.08	43.29	53.42
June		48.00 ^P	48.20	43.20	51.56
July		48.50 ^P	48.42	43.01	50.29
August		50.00 ^P	48.88	43.43	52.04
September		51.00 ^P	48.77	43.10	51.07
October		52.00 ^P	47.78	43.24	51.68
November			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	+ 3.5	75.49	72.93	65.68	71.42
February	+ 5.3	76.77	72.93	67.47	71.84
March	+ 2.6	76.90	74.90	68.15	71.65
April	- 3.4	74.15	76.74	69.61	71.27
May	- 5.2	72.22	76.16	71.27	71.00
June		70.45 ^P	74.85	71.72	70.21
July		71.22 ^P	72.47	69.99	69.50
August		70.54 ^P	73.48	69.69	68.86
September		68.90 ^P	74.39	69.82	68.54
October		68.84 ^P	74.20	69.92	68.74
November			77.46	72.56	70.60
December	+ 3.9		76.46	73.62	71.35

^P 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 July would be expected to finish in January of 2003. 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 July is up slightly from last month's calculation, at \$23.40 per pig. Hog price expectations have improved slightly, bumping up weaned pig formula transfer prices. Average Iowa direct weaned pig transfer prices remain somewhat below the formula price. Alternative budget projections and sensitivity tables are included to assess the impact of alternative weaned pig prices on break-even projections. Average weaned pig prices remain well below break-even levels for average farrowing operations.

The projected sale price needed to cover all costs associated with finishing formula priced early weaned pigs started on feed in July is \$39.26 per cwt. on a live weight basis. Pricing the weaned pig into the nursery-finish program at the mid-point of the recent Iowa reported cash transfer price (\$19.50) results in a projected break-even to cover all costs of \$37.51 per cwt. These projections are consistent with the projections of last month.

The example hog finishing budgets are calculated using a milo based feeding ration. Increasing feed ingredient prices are impacting break-even projections. Projected feed costs, based on current milo and supplement prices, are currently at \$18.59 per cwt. of live pork produced in the SEW nursery finish

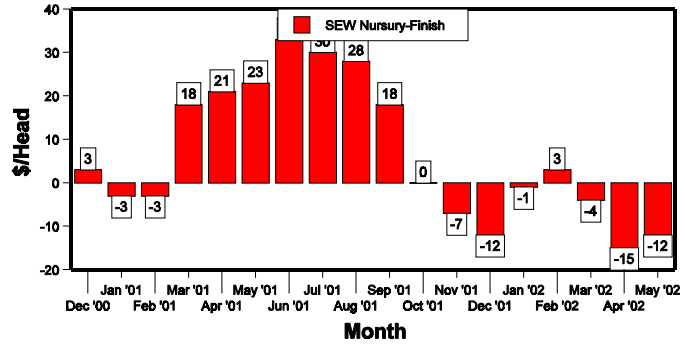
program. This projection represents an increase of about \$1.50 per cwt. of pork produced over the estimates from a few months ago.

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.

Returns to labor and management averaged about \$-12.45 per pig for hogs exiting Kansas SEW nursery-finishing barns in May. Current calculations suggest similar negative returns to labor and management for the next several months. Break-even prices to cover all costs for average producers are currently around \$43.00 on a live weight basis. Lower weaned pig prices will tend to pull break-evens lower for the rest of the year, however, rising feed prices may offset this factor and drive break-evens higher.

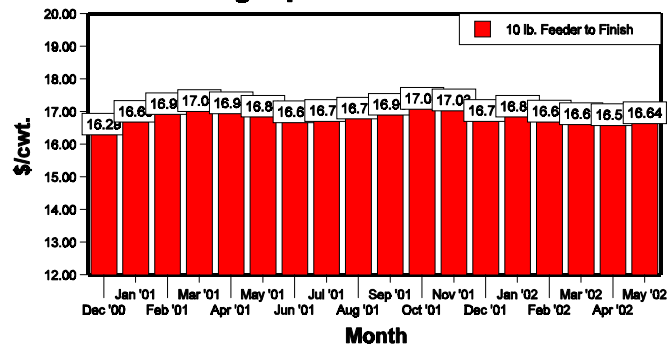
Projected break-evens to cover all costs for average Kansas farrow-to-finish producers remain around \$44.00 per cwt. on a live basis for pigs produced under current feed cost conditions. Futures based price forecasts indicate that producers will struggle to even cover cash variable costs this fall, which appear likely to average in the mid \$30's per cwt. on a live weight basis for both farrow-to-finish and nursery-finish producers.

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

July, 2002

Assumptions	Barrows and Gilts
Initial weight of weaned pig	10 lbs.
Cost of weaned pig ¹	\$23.40
Interest rate	9.0 %
Feed conversion	3.00 lbs.
Death loss	5.00 %
Milo price	\$3.72 / cwt.
Soybean meal price	\$185.00 / ton.

¹ Weaned pig prices based on KSU formula.

COST BUDGET FOR FINISHING PIGS

FEEDER	
1. Cost of weaned pig	\$23.40
2. Interest on weaned pig	\$ 0.98
FEED	
3. Grain	\$18.62
4. Soybean meal	\$11.93
5. Vitamins and minerals	\$ 8.41
6. Starter	\$ 2.45
7. Interest on feed	\$ 0.87
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	\$ 0.26
FIXED COSTS	
15. Buildings and equipment	\$11.97
Sale Price Needed to Cover Variable Costs	\$34.11
Sale Price Needed to Cover Total Costs	\$39.26
Feed Cost Per Cwt. of Pork Produced	\$18.59

SEW Nursery-Finishing

Sensitivity Analysis of Break-even Sale Price

	Purchase Price for 10 Lb. Weaned Pig				
	\$18.00	\$20.00	\$22.00	\$24.00	\$26.00
Feed Cost Per Cwt.	Break-even Sale Price for Market Hog (\$/cwt.)				
\$16.00	36.29	37.18	38.08	38.97	39.87
\$17.00	37.26	38.16	39.05	39.95	40.84
\$18.00	38.24	39.13	40.03	40.92	41.82
\$19.00	39.21	40.11	41.00	41.90	42.79
\$20.00	40.19	41.09	41.98	42.88	43.77
\$21.00	41.17	42.06	42.96	43.85	44.75
\$22.00	42.14	43.04	43.93	44.83	45.72

SEW Nursery-Finishing

Sensitivity Analysis of Maximum Weaned Pig Price

	Expected Sale Price for Market Hogs				
	\$26.00	\$28.00	\$30.00	\$32.00	\$34.00
Feed Cost Per Cwt.	Maximum Purchase Price for 10 lb. Weaned Pig				
\$16.00			3.95	8.43	12.89
\$17.00			1.77	6.25	10.71
\$18.00				4.07	8.53
\$19.00				1.89	6.35
\$20.00					4.17
\$21.00					1.99
\$22.00					