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ECONOMIC ASSESSMENT OF FEEDLOT AND OVERALL STOCKER-FEEDLOT PERFORMANCE FOR STEERS AND HEIFERS, 1998-99

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Background. Beef producers face multifaceted yet segmented production systems that require a wide variety of management decisions. Producers must understand the factors that impact the net returns of each phase of this system and the interrelationships that affect returns of the overall system. Returns from cattle feeding are highly variable since they are affected by numerous factors including cattle type and weight, feed costs, market prices, etc. Another important relationship affecting returns from feeding programs is the price rollback, or the difference between purchase and selling prices (or values). The objective of this economic assessment was to evaluate potential returns from various feedlot phase and to summarize overall pasture to packer economic situations.

Research Findings. Groups of heifers and steers grazed at three stocking rates in winter pasture systems were kept segregated and were fed in a commercial feedlot in 1998 and 1999. Cattle fed in 1998 were sorted into two weight groups (light and heavy) for each stocking rate treatment and were fed separately (Tables 1 and 2). Cattle going on feed at heavier weights generated losses ranging from \$81 to \$147 per head in 1998. Lighter cattle fed in 1998 realized estimated net returns nearer to breakeven. Net returns from cattle fed in 1999 ranged from -\$64 to \$22 per head. Total combined net returns from the stocker through feedlot phases were estimated using production costs from winter pasture phase treatments (see related articles). In most treatments, economic losses from the feedlot phase offset positive returns from the pasture phase resulting in rates of return ranging from 21% to 6% for the pasture to packer system.

Application. Producers with cattle like those depicted here should carefully study market conditions, to obtain a thorough understanding of the types of cattle packers prefer and to understand thoroughly the interrelationships involved in the beef production system. Significant losses resulting from feedlot experiences were not due to animal performance as indicated by observed ADG figures. Rather, losses were due primarily to significantly lower prices for finished animals. Lower prices were a function of depressed markets for finished cattle during these two years. Additionally, packers were reluctant to bid higher prices for cattle with days on feed far fewer than traditionally desired, even though cattle had reached generally accepted market weights. Packers traditionally express a preference for at least 180 days on feed to ensure that a sufficient proportion of cattle in a specific pen reach an acceptable yield and quality grade.

Table 1. Feedlot and total estimated economic performance of steers and heifers grazed at three stocking rates, 1998

Item	Stocking rate					
	LOW		MEDIUM		HIGH	
	Pen 1	Pen 2	Pen 1	Pen 2	Pen 1	Pen 2
FEEDLOT PHASE - on feed date	5/18/98	5/18/98	5/18/98	5/18/98	5/18/98	5/18/98
In-feedlot pay weight (lbs)	1037	896	940	814	819	711
Total shipping expense (\$)	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Shipping costs (\$/hd)	\$18.85	\$16.29	\$17.09	\$14.80	\$14.89	\$12.93
In-feedlot value (\$/hd)	\$666.79	\$576.13	\$609.12	\$527.47	\$543.00	\$471.39
Out-feedlot date	9/9/98	9/9/98	9/9/98	10/13/98	10/13/98	10/13/98
Days on feed	114	114	114	148	148	148
Cattle interest 8.0%	\$16.66	\$14.40	\$15.22	\$17.11	\$17.61	\$15.29
Feedlot gain - payweight (lbs)	414	379	428	491	584	528
Feedlot average daily gain - payweight (lbs/da)	3.63	3.32	3.75	3.32	3.95	3.57
Out-feedlot pay weight (lbs)	1451	1275	1368	1305	1403	1239
Feedlot phase cost/lb gain incl. interest (\$/lb)	\$0.4446	\$0.4343	\$0.4351	\$0.4327	\$0.3899	\$0.4109
Feedlot costs incl. interest (\$/hd)	\$184.06	\$164.60	\$186.22	\$222.28	\$227.70	\$216.96
Selling price (\$/cwt)	\$50.98	\$54.17	\$52.54	\$59.00	\$59.00	\$59.00
Breakeven price (\$/cwt)	\$59.79	\$59.23	\$59.25	\$58.76	\$56.19	\$56.79
Out-feedlot revenue (\$/hd)	\$739.72	\$690.67	\$718.75	\$769.95	\$827.77	\$731.01
Net return to feedlot phase (\$/hd)	-\$146.65	-\$80.75	-\$108.91	-\$11.71	\$24.57	\$14.44
Annualized rate of return on capital	-53%	-34%	-42%	-4%	8%	5%
TOTAL STOCKER THROUGH FEEDLOT PHASE						
Initial stocker cost (\$/hd)	\$423.60	\$423.60	\$423.60	\$423.60	\$423.60	\$423.60
Final receipts (\$/hd)	\$739.72	\$690.67	\$718.75	\$769.95	\$827.77	\$731.01
Total days	270	270	270	304	304	304
Total production costs (\$/hd)	\$363.59	\$339.30	\$335.88	\$356.72	\$362.74	\$347.71
Overall cost/lb gain (\$/lb)	\$0.43	\$0.50	\$0.44	\$0.51	\$0.45	\$0.54
Breakeven price (\$/cwt)	\$54.25	\$59.84	\$55.52	\$59.79	\$56.05	\$62.25
Returns to other factors of production (\$/hd)	-\$47.47	-\$72.23	-\$40.73	-\$10.37	\$41.43	-\$40.30
Annualized rate of return on capital	-8%	-13%	-7%	-2%	6%	-6%

Table 2. Feedlot and total estimated economic performance of steers and heifers grazed at three stocking rates, 1999

Item	Stocking rate		
	LOW	MEDIUM	HIGH
FEEDLOT PHASE - on feed date	5/19/99	5/19/99	5/19/99
In-feedlot pay weight (lbs)	919	822	649
Total shipping expense (\$)	\$1,000	\$1,000	\$1,000
Shipping costs (\$/hd)	\$16.71	\$14.95	\$11.80
In-feedlot value (\$/hd)	\$590.92	\$532.66	\$430.29
Out-feedlot date	9/27/99	9/27/99	11/10/99
Days on feed	131	131	175
Cattle interest 8.0%	\$16.97	\$15.29	\$16.50
Feedlot gain - payweight (lbs)	417	455	588
Feedlot average daily gain (lbs/da)	3.18	3.47	3.36
Out-feedlot pay weight (lbs)	1336	1277	1237
Feedlot phase cost/lb gain incl. interest (\$/lb)	\$0.49	\$0.48	\$0.48
Feedlot costs incl. interest (\$/hd)	\$206.00	\$219.49	\$281.24
Selling price (\$/cwt)	\$63.00	\$63.00	\$54.60
Breakeven price (\$/cwt)	\$60.92	\$60.10	\$58.85
Out-feedlot revenue (\$/hd)	\$841.68	\$804.51	\$675.40
Net return to feedlot phase (\$/hd)	\$11.09	\$22.12	-\$64.43
Annualized rate of return on capital	4%	8%	-18%
TOTAL STOCKER THROUGH FEEDLOT PHASE			
Initial stocker cost (\$/hd)	\$423.60	\$423.60	\$423.60
Final receipts (\$/hd)	\$841.68	\$804.51	\$675.40
Total days	287	287	331
Total production costs (\$/hd)	\$383.69	\$367.08	\$412.08
Overall cost/lb gain (\$/lb)	\$0.52	\$0.54	\$0.65
Breakeven price (\$/cwt)	\$60.43	\$61.92	\$67.56
Returns to other factors of production (\$/hd)	\$34.39	\$13.83	-\$160.27
Annualized rate of return on capital	5%	2%	-21%