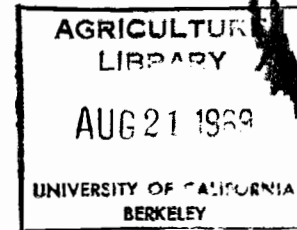


Cost of prod. studies
beef cattle
Stocker Cattle
Operation

)) Costs and Returns

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Profit in the stocker cattle operation depends on three major factors, namely: annual weight gains, per cent of mortality, and the spread in buying and selling price of the cattle. The stocker cattle operation is one where cattle are put on the range in the fall, carried through the winter and spring, and sold when the grass dries. Its potential advantage on some ranges is because all the weight gained by the animals is sold. In contrast a breeding cow loses and gains weight from season to season, but none of her seasonal weight gain is sold; only her calf's gain is sold.

The most common stocker operation is where weaner steer calves are purchased in the fall and run on the range until late spring. Older steers and heifers are also used. Cows, with or without calves, may also be run for just one grass season. The operator chooses the class of livestock he will use based on his estimate of supply, demand, and market conditions both at the time of purchase and expected at sale time.

The example shown in this study involves weaner steers carried on excellent annual range. While a loss results in the example, the reader is urged to study the tables to learn what is required to secure a profit.

The study shows a minus 4¢ per pound margin between buying and selling prices, a common occurrence in recent years. If the margin were cut to only minus 2¢ (raise selling price to 28¢), the net sales would be increased from \$30.62 per head to \$43.36 (see Table 2), almost enough to offset the net loss of \$14.43 per steer. If the sale price (30¢) were equal to the purchase price, the operation would have shown a net income of over \$11,000 instead of a loss of over \$14,000.

A change in the overall market also would have an influence (Table 3). A general market increase of 5¢ per pound would return over \$9,000 more in net sales, even with the minus 4¢ margin.

Animal gain is a most important factor influencing profit or loss. Gains of 200 pounds per head as shown in the study are common for some operations. It may be possible in some areas to increase gains by supplying additional supplemental feed from November through early February. An extra 100 pounds of concentrate supplement (cottonseed meal and barley) might result in as much as 100 pounds extra gain per head. Table 4 shows the economic significance of higher and lower gain per head.

Sound cattle management and attention to detail may be reflected in reduced losses from mortality. A one per cent reduction in mortality may result in a saving of almost \$1700 (See Table 5).

The cost, or value, of land is another factor having considerable effect on costs and returns. The effect of land value on taxes and interest on investment is shown in Table 6.

Whether it is more profitable to rent rather than own range can be determined only by knowing the actual rent charge and adding in the other operating costs. The effect of renting the range, compared to ownership, at various rates is shown in Table 7. Renting at \$7 per acre results in about the same loss as owning the land at \$80 per acre value.

In order to overcome the economic conditions shown, the operator must use all possible skill in increasing animal gains, reducing mortality, and buying and selling to the best possible advantage.

TABLE 1

STOCKER CATTLE OPERATION - 1968

1000 head steers @ 450# purchased November 1. 30¢ landed.
 2% mortality; 200 lbs. gain/head
 980 head sold May 15 @ 26¢ F.O.B. ranch
 3000 acre ranch - 3 acres per steer

<u>INVESTMENT</u>	<u>Total</u>	<u>Per steer purchased</u>
Land: 3000 acres @ \$80/a	\$240,000	\$240.00
Fences, corrals, buildings, scales	28,500	28.50
Equipment: pickup, feeders, saddles, tools	6,500	6.50
Horses: 3 @ \$500	1,500	1.50
Total Investment	<u>\$276,500</u>	<u>\$276.50</u>
 <u>ANNUAL INCOME</u>		
980 steers sold May 15 @ 650 lbs. @ 26¢	\$165,620	
1000 calves bought Nov. 1 @ 450# @ 30¢	135,000	
Net Sales	<u>\$ 30,620</u>	<u>\$ 30.62</u>
 <u>ANNUAL EXPENSE</u>		
Supplemental feed, cattle		
100 lbs. cottonseed meal/head	\$ 4,000	\$ 4.00
25 tons hay @ \$30 (sick bay, horses)	750	.75
6¼ tons salt @ \$40	250	.25
Total	<u>\$ 5,000</u>	<u>\$ 5.00</u>
Labor (7 mos. @ \$400 and \$200 extra)	\$ 3,000	\$ 3.00
Veterinarian and medicine	\$ 2,000	\$ 2.00
Fertilization (100 lbs. sulfur on 600 a/yr. @ \$4/a)	\$ 2,400	\$ 2.40
Feed for horses (grain and grass)	\$ 240	\$.24
Fuel, oil, repairs		
Pickup (500 hrs. @ \$2)	\$ 1,000	\$ 1.00
Fences, corrals, buildings, etc.	500	.50
Total	<u>\$ 1,500</u>	<u>\$ 1.50</u>
Miscellaneous (phone, office, ins., etc.)	\$ 1,000	\$ 1.00
Total	<u>\$ 15,140</u>	<u>\$ 15.14</u>

TABLE 1 (Continued)

Taxes		
Land ($\$80 \times 25\% \times \$7 \text{ rate} = \$1.40/\text{a}$)	\$ 4,200	\$ 4.20
Improvements ($\$28,500 \div 2 \times 25\%$ $\times \$7 \text{ rate}$)	249	.25
Equipment ($\$6,500 \div 2 \times 25\% \times \7 rate)	57	.06
Cattle ($\$100/\text{hd.} \times 25\% \times \7 rate)	1,750	1.75
Horses ($\$1500 \div 2 \times 25\% \times \7 rate)	13	.01
Total	<u>\$ 6,269</u>	<u>\$ 6.27</u>
Interest		
Cattle ($\$135,000 \times 7\% \times 7 \text{ mos.}$)	\$ 5,513	\$ 5.51
Operating money ($\$20,000 \times 3\frac{1}{2} \text{ mos.}$ $\times 7\%$)	408	.41
Total	<u>\$ 5,921</u>	<u>\$ 5.92</u>
Depreciation		
Improvements ($\$28,500 @ 20 \text{ yrs.}$)	\$ 1,425	\$ 1.43
Equipment ($\$6,500 @ 10 \text{ yrs.}$)	650	.65
Horses (10 yrs. minus salvage)	144	.14
Total	<u>\$ 2,219</u>	<u>\$ 2.22</u>
Interest on Investment		
Land ($\$240,000 @ 6\%$)	\$ 14,400	\$ 14.40
Improvements ($\$28,500 \div 2 \times 6\%$)	855	.86
Equipment ($\$6,500 \div 2 \times 6\%$)	195	.20
Horses ($\$1500 + \$60 \text{ salvage} \div 2$ $\times 6\%$)	47	.05
Total	<u>\$ 15,497</u>	<u>\$ 15.51</u>
TOTAL ANNUAL EXPENSE	\$ 45,046	\$ 45.05
NET ANNUAL SALES	\$ 30,620	\$ 30.62
NET INCOME	-\$ 14,426	-\$ 14.43

TABLE 2

NET SALES PER HEAD PURCHASED

Buy 1000 head, 2% mortality, sell 980 head
 Buying weight 475 lbs. sale weight 650 lbs.
Net sale weight 637 lbs. after mortality

Sale Price	Buying price - landed													
	24¢	25¢	26¢	27¢	28¢	29¢	30¢	31¢	32¢	33¢	34¢	35¢	36¢	37¢
20¢	19.40	14.90	10.40	5.90	1.40	-3.10	-7.60	-12.10	-16.60	-21.10	-25.60	-30.10	-34.60	-39.10
21¢	25.77	21.27	16.77	12.27	7.77	3.27	-1.23	-5.73	-10.23	-14.73	-19.23	-23.73	-28.23	-32.73
22¢	32.14	27.64	23.14	18.64	14.14	9.64	5.14	.64	-3.86	-8.36	-12.86	-17.36	-21.86	-26.36
23¢	38.51	34.01	29.51	25.01	20.51	16.01	11.51	7.01	2.51	-1.99	-6.49	-10.99	-15.49	-19.99
24¢	44.88	40.38	35.88	31.38	26.88	22.38	17.88	13.38	8.88	4.38	-.12	-4.62	-9.12	-13.62
25¢	51.25	46.75	42.25	37.75	33.25	28.75	24.25	19.75	15.25	10.75	6.25	1.75	-2.75	-7.25
26¢	57.62	53.12	48.62	44.12	39.62	35.12	<u>30.62</u>	26.12	21.62	17.12	12.62	8.12	3.62	-.88
27¢	63.99	59.49	54.99	50.49	45.99	41.49	36.99	32.49	27.99	23.49	18.99	14.49	9.99	5.49
28¢	70.36	65.86	61.36	56.86	52.36	47.86	43.36	38.86	34.36	29.86	25.36	20.86	16.36	11.86
29¢	76.73	72.23	67.73	63.23	58.73	54.23	49.73	45.23	40.73	36.23	31.73	27.23	22.73	18.23
30¢	83.10	78.60	74.10	69.60	65.10	60.60	56.10	51.60	47.10	42.60	38.10	33.60	29.10	24.60
31¢	89.47	84.97	80.47	75.97	71.47	66.97	62.47	57.97	53.47	48.97	44.47	39.97	35.47	30.97
32¢	95.84	91.34	86.84	82.34	77.84	73.34	68.84	64.34	59.84	55.34	50.84	46.34	41.84	37.34
33¢	102.21	97.71	93.21	88.71	84.21	79.71	75.21	70.71	66.21	61.71	57.21	52.71	48.21	43.71
34¢	108.58	104.08	99.58	95.08	90.58	86.08	81.58	77.08	72.58	68.08	63.58	59.08	54.58	50.08
35¢	114.95	110.45	105.95	101.45	96.95	92.45	87.95	83.45	78.95	74.45	69.95	65.45	60.95	56.45

TABLE 3

Change in Total Market Level

(keeping 4¢ spread in buying and selling prices)

Buy at	30¢	and sell @	26¢	=	net sales of	\$30,620
	31¢		27¢	=		\$32,490
	32¢		28¢	=		\$34,360
	33¢		29¢	=		\$36,230
	34¢		30¢	=		\$38,100
	35¢		31¢	=		\$39,970
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	29¢		25¢	=		\$28,750
	28¢		24¢	=		\$26,880
	27¢		23¢	=		\$25,010
	26¢		22¢	=		\$23,140
	25¢		21¢	=		\$21,270

Change in Selling Price

637,000 lbs. sold @	1¢	=	\$ 6,370
	2¢	=	\$12,740
	3¢	=	\$19,110
	4¢	=	\$25,480

Change in Buying Price

450,000 lbs. bought @	1¢	=	\$ 4,500
	2¢	=	\$ 9,000
	3¢	=	\$13,500
	4¢	=	\$18,000

TABLE 4

CHANGE IN GAIN/HEAD

+ -	10#	on 980 head	=	9,800 lbs. @ 26¢	=	+ -	\$ 2,548
+ -	20#		=	19,600	=	+ -	5,096
+ -	30#		=	29,400	=	+ -	7,644
+ -	40#		=	39,200	=	+ -	10,192
+ -	50#		=	49,000	=	+ -	12,740
+ -	100#		=	98,000	=	+ -	25,480

TABLE 5

CHANGE IN MORTALITY

.5%	=	3,250 lbs. @ 26¢	=	\$ 845 loss
1.0%	=	6,500	=	1,690 loss
1.5%	=	9,750	=	2,535 loss

2.0%	=	13,000 lbs. @ 26¢	=	\$3,380 loss
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2.5%	=	16,250	=	4,225 loss
3.0%	=	19,500	=	5,070 loss
3.5%	=	22,750	=	5,915 loss
4.0%	=	26,000	=	6,760 loss

TABLE 6

CHANGE IN LAND VALUE

	\$40/a	\$60/a	\$80/a	\$100/a	\$120/a
Land tax	\$ 2,100	\$ 3,150	\$ 4,200	\$ 5,250	\$ 6,300
Interest on investment	7,200	10,800	14,400	18,000	21,600
Other expenses	<u>26,446</u>	<u>26,446</u>	<u>26,446</u>	<u>26,446</u>	<u>26,446</u>
Total Expense	\$35,746	\$40,396	\$45,046	\$49,696	\$54,346
Net Sales	\$30,620	\$30,620	\$30,620	\$30,620	\$30,620
Net Income	-\$ 5,126	-\$ 9,776	-\$14,426	-\$19,076	-\$23,726

TABLE 7

RENT RATHER THAN OWN?

	<u>Rent</u>		<u>Total*</u> <u>Expense</u>	<u>Net</u> <u>Sales</u>	<u>Net</u> <u>Income</u>
	<u>Per Acre</u>	<u>Total</u>			
	\$	\$	\$23,917	\$30,620	\$ 6,703
1.00		3,000	26,917	"	3,703
2.00		6,000	29,917	"	703
3.00		9,000	32,917	"	- 2,297
4.00		12,000	35,917	"	- 5,297
5.00		15,000	38,917	"	- 8,297
6.00		18,000	41,917	"	- 11,297
7.00		21,000	44,917	"	- 14,297
8.00		24,000	47,917	"	- 17,297
9.00		27,000	50,917	"	- 20,297
10.00		30,000	53,917	"	- 23,297

* \$45,046 less \$21,129 (interest on land \$14,400; tax on land \$4,200; and taxes, depreciation, and interest on improvements \$2,529)