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The authors are indebted to Carol Weber and Myrnalee Harden for their hours of work in preparing this publication. Appreciation is extended to Don Lancaster, Crops Farm Advisor, Modoc County; Lester McKenzie, Planner, Modoc County; and Doyle Reed, Economist, UC Davis for their invaluable help in constructing the budget. And, a very special thanks to the livestock producers and business people who are too numerous to mention, for their suggestions and information.

## BEEF CATTLE PRODUCTION COSTS IN MODOC COUNTY

### INTRODUCTION

Total gross agricultural income for Modoc County has ranged from \$47.6 million in 1975 to \$67.6 million in 1979. During this same five year period, gross income from beef cattle only has increased from \$6.7 million in 1975 to \$22.8 million in 1979. These figures indicate that beef cattle alone contributed 34 percent of Modoc County's total gross agricultural income for 1979 and an average of 25 percent of this total over the past five years. Thus, beef cattle production is the most important single industry involved in the economy of Modoc County.

This study presents data on the cash and non-cash cost of producing beef in Modoc County. It is hoped that this information will serve a two-fold purpose; 1) give established producers an opportunity to compare and evaluate their operations, and 2) provide information on investment costs, operating costs, and expected returns for those new operators who are unfamiliar with Modoc conditions. The study includes examples of ranch sizes representing 200, 500 and 1000 producing cows. No attempt has been made to present data from any particular ranch, but rather, the figures shown represent ranches of average management and production.

Initial values in this study were obtained through meetings and interviews with ranchers representing the size operations shown. It has been necessary to update these values periodically, but with unprecedented inflation and wildly fluctuating markets the study still may not reflect the true economic picture on the date presented. For this reason, tables have been added to give a comparison of returns at different market weights, prices per pound, and at increasing costs.

How cattle are marketed depends on several factors; including owner preference, ranch capabilities, and price at any given time. In Modoc County producers annually market a significant number of both weaners and long yearlings. Production costs and returns vary with the type of operation involved. For this reason, this study has been divided into two parts; 1) marketing weaner calves, and 2) marketing yearlings. It is hoped that this procedure will offer useable information to those who traditionally operate one way or the other and those who, through built-in flexibility, may fluctuate depending on market conditions.

One final observation is in order. This study indicates that with the market weights and prices used, producers are barely above the break-even point at the present time. Experience indicates that production costs will continue to escalate while prices will continue to fluctuate. If prices fall or even remain stable, the profit position of the producer will worsen rapidly. Any increase in production costs, caused by increasing regulatory demands, unless accompanied by increased production efficiency, will accelerate this depressed economic situation.

SUMMARY OF BEEF CATTLE PRODUCTION  
MARKETING WEANER CALVES

A. INVESTMENT

|                         | Page No.* | 200 COWS         |                |            |
|-------------------------|-----------|------------------|----------------|------------|
|                         |           | AMOUNT           | COST/COW       | PERCENT    |
| 1. Land                 | 2         | \$193,500        | \$ 968         | 48         |
| 2. Improvements         | 2         | 18,675           | 93             | 5          |
| 3. Equipment            | 3         | 30,830           | 154            | 8          |
| 4. Livestock            | 4         | 148,650          | 743            | 37         |
| 5. Public Land          | 4         | 6,680            | 33             | 2          |
| <b>TOTAL INVESTMENT</b> |           | <b>\$398,335</b> | <b>\$1,991</b> | <b>100</b> |

B. CASH COSTS

|                                      |   | AMOUNT          | COST/COW        | COST/LB      |
|--------------------------------------|---|-----------------|-----------------|--------------|
| 1. Range Fees & Salt                 | 5 | 2,450           | \$12.25         | 2.8¢         |
| 2. Labor                             | 5 |                 |                 |              |
| 3. Repairs & Maintenance             | 5 | 5,746           | 28.73           | 6.6          |
| 4. Taxes, Insurance, Accounting, Etc | 5 | 4,764           | 23.82           | 5.5          |
| 5. Bull Replacement                  | 5 | 3,600           | 18.00           | 4.2          |
| 6. Veterinary & Medicine             | 5 | 1,500           | 7.50            | 1.7          |
| 7. Baling Wire & Custom Haying       | 5 | 7,200           | 36.00           | 8.3          |
| 8. Fertilizer                        | 5 | 2,370           | 11.85           | 2.7          |
| 9. Fuel & Irrigation Power           | 5 | 4,549           | 22.75           | 5.3          |
| 10. Misc.                            | 5 | 2,000           | 10.00           | 2.3          |
| <b>TOTAL CASH COSTS</b>              |   | <b>\$34,179</b> | <b>\$170.90</b> | <b>39.4¢</b> |

C. NON-CASH COSTS

|  |   |                 |              |              |
|--|---|-----------------|--------------|--------------|
| 1. Interest (Operating Capital)                    | 5 | \$4,102         | 20.51        | 4.7¢         |
| 2. Depreciation <i>on equipment - improvements</i> | 5 | 7,660           | 38.30        | 8.8          |
| <b>TOTAL NON-CASH COSTS</b>                        |   | <b>\$11,762</b> | <b>58.81</b> | <b>13.5¢</b> |

D. NET INCOME

|                         |   |        |        |      |
|-------------------------|---|--------|--------|------|
| 1. Gross Income         | 6 | 61,230 | 306.15 | 70.7 |
| 2. Less Cash Costs      | 5 | 34,179 | 170.90 | 39.4 |
| 3. Ranch Income         | 6 | 27,051 | 135.25 | 31.3 |
| 4. Less Non-Cash Costs  | 5 | 11,762 | 58.81  | 13.5 |
| 5. Net Income           | 6 | 15,289 | 76.44  | 17.8 |
| 6. Less Family Labor    | 6 | 12,000 | 60.00  | 13.9 |
| 7. Return on Investment | 6 | 3,289  | 16.44  | 3.9  |
| 8. Percent Return       | 6 | 0.8    |        |      |

\*Refer to page indicated for further details

| AMOUNT    | 500 COWS |         | AMOUNT    | 1000 COWS |         |
|-----------|----------|---------|-----------|-----------|---------|
|           | COST/COW | PERCENT |           | COST/COW  | PERCENT |
| \$490,000 | \$ 980   | 47      | \$976,000 | \$ 976    | 48      |
| 62,100    | 124      | 6       | 115,650   | 116       | 6       |
| 92,317    | 185      | 9       | 176,913   | 177       | 9       |
| 372,000   | 744      | 36      | 744,000   | 744       | 36      |
| 16,700    | 33       | 2       | 33,400    | 33        | 2       |

\$1,033,117      \$2,066      100      \$2,045,963      \$2,046      100

| AMOUNT | COST/COW | COST/LB | AMOUNT | COST/COW | COST/LB |
|--------|----------|---------|--------|----------|---------|
| 6,125  | 12.25    | 2.8¢    | 12,250 | 12.25    | 2.8¢    |
| 14,180 | 28.36    | 6.6     | 42,540 | 42.54    | 9.8     |
| 17,574 | 35.15    | 8.1     | 33,476 | 33.48    | 7.7     |
| 11,136 | 22.72    | 5.2     | 19,641 | 19.64    | 4.5     |
| 9,000  | 18.00    | 4.2     | 18,000 | 18.00    | 4.2     |
| 3,750  | 7.50     | 1.7     | 7,500  | 7.50     | 1.7     |
| 3,000  | 6.00     | 1.4     | 6,000  | 6.00     | 1.4     |
| 6,640  | 13.28    | 3.1     | 13,280 | 13.28    | 3.1     |
| 13,597 | 27.19    | 6.3     | 27,195 | 27.20    | 6.3     |
| 5,000  | 10.00    | 2.3     | 10,000 | 10.00    | 2.3     |

\$90,002      \$180.45      41.7¢      \$189,882      \$189.88      43.8¢

10,702      21.40      5.0      22,588      22.59      5.2  
 23,431      46.86      10.9      44,635      44.64      10.3

\$34,133      68.26      15.9      67,223      67.23      15.5

|           |         |      |           |         |      |
|-----------|---------|------|-----------|---------|------|
| \$152,690 | 305.38  | 70.4 | \$306,150 | 306.15  | 70.7 |
| 90,002    | 180.45  | 41.7 | 189,882   | 189.88  | 43.8 |
| 62,688    | 124.93  | 28.7 | 116,268   | 116.27  | 26.9 |
| 34,133    | 68.26   | 15.9 | 67,223    | 67.23   | 15.5 |
| 28,555    | 56.67   | 12.8 | 49,045    | 49.04   | 11.4 |
| 12,000    | 24.00   | 5.6  | 12,000    | 12.00   | 2.8  |
| \$16,555  | \$32.67 | 7.2¢ | \$37,045  | \$37.04 | 8.6¢ |
| 1.6       |         |      | 1.8       |         |      |

**BEEF CATTLE PRODUCTION  
MARKETING WEANER CALVES**

**I. INVESTMENT**

**A. LAND**

|   | <u>200 COWS</u> |                  | <u>500 COWS</u> |                  | <u>1000 COWS</u> |                  |
|---|-----------------|------------------|-----------------|------------------|------------------|------------------|
|   | <u>ACRES</u>    | <u>VALUE</u>     | <u>ACRES</u>    | <u>VALUE</u>     | <u>ACRES</u>     | <u>VALUE</u>     |
| 1. Alfalfa-Unimproved<br>\$500 per acre | 40              | \$20,000         | 80              | \$ 40,000        | 160              | \$ 80,000        |
| 2. Irrigated Meadow<br>\$450 per acre   | 110             | 49,500           | 320             | 144,000          | 640              | 288,000          |
| 3. Range<br>\$100 per acre              | 1,200           | 120,000          | 3,000           | 300,000          | 6,000            | 600,000          |
| 4. Farmstead<br>\$400 per acre          | 10              | 4,000            | 15              | 6,000            | 20               | 8,000            |
| <b>TOTAL LAND INVESTMENT</b>            | <b>1,360</b>    | <b>\$193,500</b> | <b>3,415</b>    | <b>\$490,000</b> | <b>6,820</b>     | <b>\$976,000</b> |
| <b>INVESTMENT PER COW</b>               |                 | <b>\$ 968</b>    |                 | <b>\$ 980</b>    |                  | <b>\$ 976</b>    |

**B. IMPROVEMENTS**

|                                     | <u>NO.</u> | <u>VALUE</u>    | <u>NO.</u> | <u>VALUE</u>     | <u>NO.</u> | <u>VALUE</u>     |
|-------------------------------------|------------|-----------------|------------|------------------|------------|------------------|
| 1. Home-Hired Help                  |            |                 | 1          | 30,000           | 3          | 90,000           |
| 2. Pole Barn                        |            |                 | 1          | 15,000           | 2          | 30,000           |
| 3. Machine Shed                     | 1          | 3,500           | 1          | 7,000            | 1          | 7,000            |
| 4. Shop & Tools                     | 1          | 8,400           | 1          | 17,000           | 1          | 18,000           |
| 5. Corral                           | 1          | 4,650           | 1          | 9,300            | 1          | 9,300            |
| 6. Fences \$2000/mile               | 3          | 6,000           | 10         | 20,000           | 20         | 40,000           |
| 7. Squeeze Chute                    | 1          | 1,500           | 1          | 1,500            | 2          | 3,000            |
| 8. Livestock Scales                 |            |                 | 1          | 4,800            | 1          | 4,800            |
| 9. Well 14"-400' @ \$25/ft          | 1          | 10,000          | 1          | 10,000           | 1          | 10,000           |
| 10. Ditches \$30/ac Meadows         | 110        | 3,300           | 320        | 9,600            | 640        | 19,200           |
| <b>TOTAL IMPROVEMENTS</b>           |            | <b>\$37,350</b> |            | <b>\$124,200</b> |            | <b>\$231,300</b> |
| <b>CURRENT VALUE (50% of total)</b> |            | <b>18,675</b>   |            | <b>62,100</b>    |            | <b>115,650</b>   |
| <b>CURRENT VALUE PER COW</b>        |            | <b>93</b>       |            | <b>124</b>       |            | <b>116</b>       |

WEANER CALF PRODUCTION

I. INVESTMENT

C. EQUIPMENT

|                            | 200 COWS |        | 500 COWS |        | 1000 COWS |        |
|----------------------------|----------|--------|----------|--------|-----------|--------|
|                            | NO.      | VALUE  | NO.      | VALUE  | NO.       | VALUE  |
| 1. Tractors                |          |        |          |        |           |        |
| a. 30 hp                   |          |        | 2        | 17,000 | 3         | 25,500 |
| b. 50 hp                   | 1        | 11,500 | 1        | 11,500 | 1         | 11,500 |
| c. 80 hp                   |          |        |          |        | 1         | 66,000 |
| 2. Plow, 16"               | 1-3 Bot  | 1,495  | 1-3 Bot  | 1,495  | 1-5 Bot   | 2,700  |
| 3. Disk, Tandem            | 1-10 Ft  | 3,240  | 1-10 Ft  | 3,240  | 1-14 Ft   | 4,800  |
| 4. Spike Harrow            | 1-20 Ft  | 1,500  | 1-28 Ft  | 2,148  | 1-40 Ft   | 3,600  |
| 5. Drag, Meadow            | 1        | 1,500  | 1        | 1,500  | 2         | 3,000  |
| 6. Drill                   | 1-8 Ft   | 3,750  | 1-14 Ft  | 4,800  | 1-14 Ft   | 4,800  |
| 7. Sprayer                 | 1        | 2,000  | 1        | 2,000  | 1         | 2,000  |
| 8. Baler                   |          |        |          |        |           |        |
| a. PTO                     |          |        | 1        | 11,000 | 1         | 11,000 |
| b. SP                      |          |        |          |        | 1         | 21,000 |
| 9. Side Delivery Rake      |          |        | 1        | 2,300  | 1         | 2,300  |
| 10. Swather                |          |        | 1        | 22,000 | 2         | 44,000 |
| 11. Bale Loader            | 1        | 1,000  | 1        | 1,000  | 2         | 2,000  |
| 12. Harrow Bed             |          |        | 1        | 32,000 | 1         | 32,000 |
| 13. Wagon                  | 1        | 975    | 2        | 1,950  | 3         | 2,925  |
| 14. Truck-2 ton            |          |        | 1        | 15,000 | 2         | 30,000 |
| 15. Pickup-3/4 ton 4X4     | 1        | 9,000  | 2        | 18,000 | 3         | 27,000 |
| 16. Stock Trailer          | 1        | 3,000  | 1        | 3,000  | 1         | 3,000  |
| 17. Auto                   | 1/2      | 4,000  | 1/2      | 4,000  | 1/2       | 4,000  |
| 18. Irrigation Pump        | 1-40 hp  | 8,000  | 1-75 hp  | 12,000 | 1-125 hp  | 16,000 |
| 19. Wheel Lines @ \$200/ac | 40       | 8,000  | 80       | 16,000 | 160       | 32,000 |
| 20. Ditcher                | 1        | 2,700  | 1        | 2,700  | 1         | 2,700  |

|                              |          |           |           |
|------------------------------|----------|-----------|-----------|
| TOTAL EQUIPMENT              | \$61,660 | \$184,633 | \$353,825 |
| CURRENT VALUE (50% of total) | 30,830   | 92,317    | 176,913   |
| CURRENT VALUE PER COW        | 154      | 185       | 177       |

## WEANER CALF PRODUCTION

### I. INVESTMENT

#### D. LIVESTOCK

|                                   | <u>200 COWS</u> |               |
|-----------------------------------|-----------------|---------------|
|                                   | <u>NO.</u>      | <u>VALUE</u>  |
| 1. Saddle Horses @ \$750          | 3               | 2,250         |
| 2. Cows @ \$600                   | 200             | 120,000       |
| 3. Replacement Heifers<br>@ \$300 | 40              | 12,000        |
| 4. Bulls @ \$1,200                | <u>12</u>       | <u>14,400</u> |
| <br>TOTAL LIVESTOCK               | <br>255         | <br>\$148,650 |
| VALUE PER COW                     |                 | 743           |

#### E. PUBLIC LAND

|                              |          |              |
|------------------------------|----------|--------------|
| 1. Water Development         | 4        | 2,680        |
| 2. Fences @ \$1,000/mi (50%) | <u>4</u> | <u>4,000</u> |
| <br>TOTAL PUBLIC LAND        |          | <br>\$6,680  |
| VALUE PER COW                |          | 33           |

#### F. TOTAL INVESTMENT

|                                 | <u>VALUE</u>  | <u>VALUE/COW</u> |
|---------------------------------|---------------|------------------|
| 1. Land                         | 193,500       | 968              |
| 2. Improvements - Current Value | 18,675        | 93               |
| 3. Equipment - Current Value    | 30,830        | 154              |
| 4. Livestock                    | 148,650       | 743              |
| 5. Public Land                  | <u>6,680</u>  | <u>33</u>        |
| <br>TOTAL INVESTMENT            | <br>\$398,335 | <br>\$ 1,991     |



| <u>500 COWS</u> |              | <u>1000 COWS</u> |              |
|-----------------|--------------|------------------|--------------|
| <u>NO.</u>      | <u>VALUE</u> | <u>NO.</u>       | <u>VALUE</u> |
| 8               | 6,000        | 16               | 12,000       |
| 500             | 300,000      | 1,000            | 600,000      |
| 100             | 30,000       | 200              | 60,000       |
| 30              | 36,000       | 60               | 72,000       |
| 638             | 372,000      | 1,276            | 744,000      |
|                 | 744          |                  | 744          |
| 10              | 6,700        | 20               | 13,400       |
| 10              | 10,000       | 20               | 20,000       |
|                 | \$16,700     |                  | \$33,400     |
|                 | 33           |                  | 33           |

| <u>VALUE</u> | <u>VALUE/COW</u> | <u>VALUE</u> | <u>VALUE/COW</u> |
|--------------|------------------|--------------|------------------|
| 490,000      | 980              | 976,000      | 976              |
| 62,100       | 124              | 115,650      | 116              |
| 92,317       | 185              | 176,913      | 177              |
| 372,000      | 744              | 744,000      | 744              |
| 16,700       | 33               | 33,400       | 33               |

\$1,033,117      \$2,066      \$2,045,963      \$2,046

## WEANER CALF PRODUCTION

## II OPERATING COSTS

## A. CASH COSTS

|                                       | 200 COWS        |              |
|---------------------------------------|-----------------|--------------|
|                                       | AMOUNT          | COST/LB      |
| 1. Range Fees \$2.40/AUM              | \$2,230         | 2.6¢         |
| 2. Salt                               | 220             | 0.3          |
| 3. Labor                              |                 |              |
| a. Part Time \$800/mo                 |                 |              |
| b. Full Time \$915/mo                 |                 |              |
| 4. Repairs & Maintenance              |                 |              |
| a. Equipment (7½% orig. cost)         | 4,625           | 5.3          |
| b. Improvements (3% orig. cost)       | 1,121           | 1.3          |
| 5. Taxes                              |                 |              |
| a. Property \$4.15/100                | 2,201           | 2.5          |
| b. Advalorem & Possesory Int.         | 363             | 0.4          |
| 6. Insurance                          | 1,200           | 1.4          |
| 7. Bull Replacement \$1200 ea.        | 3,600           | 4.2          |
| 8. Veterinary & Medicine \$7.50/cow   | 1,500           | 1.7          |
| 9. Baling Wire \$3/ton                |                 |              |
| 10. Fertilizer-Alf \$7/ac Mea \$19/ac | 2,370           | 2.7          |
| 11. Fees, Travel & Accounting         | 1,000           | 1.2          |
| 12. Custom Haying \$18/ton            | 7,200           | 8.3          |
| 13. Fuel                              | 2,000           | 2.3          |
| 14. Irrigation Power \$21.24/ac ft    | 2,549           | 2.9          |
| 15. Misc.                             | 2,000           | 2.3          |
| <b>TOTAL CASH COSTS</b>               | <b>\$34,179</b> | <b>39.4¢</b> |
| <b>CASH COSTS PER COW</b>             | <b>171</b>      |              |

## B. NON-CASH COSTS

|                                    |                 |              |
|------------------------------------|-----------------|--------------|
| 1. Int. on Operating Capital (12%) | \$4,102         | 4.7          |
| 2. Depreciation                    |                 |              |
| a. Improvements (4% of cost)       | 1,494           | 1.7          |
| b. Equipment (10% of cost)         | 6,166           | 7.1          |
| <b>TOTAL NON-CASH COSTS</b>        | <b>\$11,762</b> | <b>13.5¢</b> |
| <b>NON-CASH COSTS PER COW</b>      | <b>59</b>       |              |

| <u>500 COWS</u> |                | <u>1000 COWS</u> |                |
|-----------------|----------------|------------------|----------------|
| <u>AMOUNT</u>   | <u>COST/LB</u> | <u>AMOUNT</u>    | <u>COST/LB</u> |
| \$5,575         | 2.6¢           | \$11,150         | 2.6¢           |
| 550             | 0.3            | 1,100            | 0.3            |
| 3,200           | 1.5            | 9,600            | 2.2            |
| 10,980          | 5.1            | 32,940           | 7.6            |
| 13,848          | 6.4            | 26,537           | 6.1            |
| 3,726           | 1.7            | 6,939            | 1.6            |
| 5,728           | 2.7            | 11,326           | 2.6            |
| 908             | 0.4            | 1,815            | 0.4            |
| 3,000           | 1.4            | 4,500            | 1.0            |
| 9,000           | 4.2            | 18,000           | 4.2            |
| 3,750           | 1.7            | 7,500            | 1.7            |
| 3,000           | 1.4            | 6,000            | 1.4            |
| 6,640           | 3.1            | 13,280           | 3.1            |
| 1,500           | 0.7            | 2,000            | 0.5            |
| 8,500           | 3.9            | 17,000           | 3.9            |
| 5,097           | 2.4            | 10,195           | 2.4            |
| 5,000           | 2.3            | 10,000           | 2.3            |
| \$90,002        | 41.8¢          | \$189,882        | 44.0¢          |
| 180             |                | 190              |                |
| \$10,702        | 5.0¢           | \$22,588         | 5.2¢           |
| 4,968           | 2.3            | 9,252            | 2.1            |
| 18,463          | 8.6            | 35,383           | 8.2            |
| \$34,133        | 15.9           | \$67,223         | 15.5           |
| 68              |                | 67               |                |

## WEANER CALF PRODUCTION

### II OPERATING COSTS (con't)

#### C. TOTAL COSTS

|                                | <u>200 COWS</u> |                |                 |
|--------------------------------|-----------------|----------------|-----------------|
|                                | <u>AMOUNT</u>   | <u>COST/LB</u> | <u>COST/COW</u> |
| 1. Cash Costs                  | \$34,179        | \$0.39         | \$171           |
| 2. Non-Cash Costs              | <u>11,762</u>   | <u>0.14</u>    | <u>59</u>       |
| <b>TOTAL OPERATING COSTS</b>   | <b>\$45,941</b> | <b>0.53</b>    | <b>\$230</b>    |
| 3. Family Labor                | 12,000          | 0.14           | 60              |
| 4. Interest on Investment (9%) | <u>35,850</u>   | <u>0.41</u>    | <u>179</u>      |
| <b>TOTAL PRODUCTION COSTS</b>  | <b>\$93,791</b> | <b>1.08</b>    | <b>\$469</b>    |

### III. INCOME

#### A. GROSS INCOME

|                           | <u>NO.</u> | <u>AMOUNT</u>   | <u>INCOME/</u> |
|---------------------------|------------|-----------------|----------------|
|                           |            |                 | <u>COW</u>     |
| 1. Steers 425 lbs @ 88¢   | 80         | \$29,920        | 150            |
| 2. Heifers 400 lbs @ 80¢  | 40         | 12,800          | 64             |
| 3. Cows 900 lbs @ 50¢     | 36         | 16,200          | 81             |
| 4. Bulls 1400 lbs @ 55¢   | <u>3</u>   | <u>2,310</u>    | <u>12</u>      |
| <b>TOTAL GROSS INCOME</b> | <b>159</b> | <b>\$61,230</b> | <b>307</b>     |

#### B. NET INCOME

|                           | <u>AMOUNT</u> | <u>INCOME/</u> |            |
|---------------------------|---------------|----------------|------------|
|                           |               | <u>LB</u>      | <u>COW</u> |
| 1. Gross Income           | \$61,230      | .71¢           | \$307      |
| 2. Less Cash Costs        | <u>34,179</u> | <u>.39</u>     | <u>171</u> |
| 3. Ranch Income           | 27,051        | .32            | 136        |
| 4. Less Non Cash Costs    | <u>11,762</u> | <u>.14</u>     | <u>59</u>  |
| 5. Net Income             | 15,289        | .18            | 77         |
| 6. Less Family Labor      | <u>12,000</u> | <u>.14</u>     | <u>60</u>  |
| 7. Return on Investment   | \$ 3,289      | .04            | 17         |
| 8. % Return on Investment | 0.8           |                |            |

| <u>500 COWS</u> |                |                 | <u>1000 COWS</u> |                |                 |
|-----------------|----------------|-----------------|------------------|----------------|-----------------|
| <u>AMOUNT</u>   | <u>COST/LB</u> | <u>COST/COW</u> | <u>AMOUNT</u>    | <u>COST/LB</u> | <u>COST/COW</u> |
| \$90,002        | \$0.42         | \$180           | \$189,882        | \$0.44         | \$190           |
| 34,133          | 0.16           | 68              | 67,223           | 0.16           | 67              |
| \$124,135       | 0.58           | \$248           | \$257,105        | 0.60           | \$257           |
| 12,000          | 0.06           | 24              | 12,000           | 0.03           | 12              |
| 92,981          | 0.43           | 186             | 184,137          | 0.43           | 184             |
| \$229,116       | 1.07           | \$458           | \$453,242        | \$1.06         | \$453           |

| <u>NO.</u> | <u>AMOUNT</u> | <u>INCOME/COW</u> | <u>NO.</u> | <u>AMOUNT</u> | <u>INCOME/COW</u> |
|------------|---------------|-------------------|------------|---------------|-------------------|
| 200        | 74,800        | 150               | 400        | 149,600       | 150               |
| 100        | 32,000        | 64                | 200        | 64,000        | 64                |
| 90         | 40,500        | 81                | 180        | 81,000        | 81                |
| 7          | 5,390         | 11                | 15         | 11,550        | 12                |
| 397        | \$152,690     | 306               | 795        | \$306,150     | 307               |

| <u>AMOUNT</u> | <u>INCOME/LB</u> | <u>INCOME/COW</u> | <u>AMOUNT</u> | <u>INCOME/LB</u> | <u>INCOME/COW</u> |
|---------------|------------------|-------------------|---------------|------------------|-------------------|
| \$152,690     | .71¢             | \$306             | \$306,150     | .71¢             | \$307             |
| 90,002        | .42              | 180               | 189,882       | .44              | 190               |
| 62,688        | .29              | 126               | 116,268       | .27              | 117               |
| 34,133        | .16              | 68                | 67,223        | .16              | 67                |
| 28,555        | .13              | 58                | 49,045        | .11              | 50                |
| 12,000        | .06              | 24                | 12,000        | .03              | 12                |
| \$16,555      | .07¢             | \$ 34             | \$37,045      | .08¢             | \$ 38             |
| 1.6           |                  |                   | 1.8           |                  |                   |

PERCENT RETURN ON INVESTMENT

Showing Increasing Costs  
Weaner Calf Production

Price/lb - Steer Calves

200 Cow Operation

|     | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|------|------|------|
| 0%  | 0.4 | 2.6 | 4.2  | 7.0  | 9.1  |
| 5%  | -0- | 1.8 | 3.9  | 6.0  | 8.0  |
| 10% | -0- | 1.1 | 3.0  | 5.0  | 7.0  |
| 15% | -0- | 0.4 | 2.3  | 4.2  | 6.1  |
| 20% | -0- | -0- | 1.6  | 3.4  | 5.2  |

500 Cow Operation

|     | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|------|------|------|
| 0%  | 1.2 | 3.3 | 5.4  | 7.5  | 9.6  |
| 5%  | 0.6 | 2.5 | 4.5  | 6.5  | 8.5  |
| 10% | -0- | 1.8 | 3.7  | 5.6  | 7.5  |
| 15% | -0- | 1.2 | 3.0  | 4.8  | 6.6  |
| 20% | -0- | 0.6 | 2.3  | 4.1  | 5.8  |

1000 Cow Operation

|     | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|------|------|------|
| 0%  | 1.4 | 3.6 | 5.7  | 7.8  | 9.9  |
| 5%  | 0.8 | 2.8 | 4.8  | 6.8  | 8.8  |
| 10% | 0.1 | 2.0 | 4.0  | 6.0  | 7.8  |
| 15% | -0- | 1.4 | 3.2  | 5.1  | 6.9  |
| 20% | -0- | 0.8 | 2.5  | 4.3  | 6.1  |

PERCENT INCREASE IN ALL COSTS

NOTE: Percent increase in all costs includes cash costs, non-cash costs, family labor and investment.

**DOLLAR RETURN ON INVESTMENT  
MARKETING WEANER CALVES**

**Price/lb - Steer Calves**

**200 Cow Operation**

|     | .75     | .85    | .95    | 1.05   | 1.15   | 1.25   |
|-----|---------|--------|--------|--------|--------|--------|
| 385 | -10,348 | -2,168 | 6,012  | 14,192 | 22,372 | 30,552 |
| 405 | - 8,610 | - 190  | 8,230  | 16,650 | 25,070 | 33,490 |
| 425 | - 6,871 | 1,789  | 10,449 | 19,109 | 27,769 | 36,429 |
| 445 | - 5,132 | 3,768  | 12,668 | 21,568 | 30,468 | 39,368 |
| 465 | - 3,394 | 5,746  | 14,886 | 24,026 | 33,166 | 42,306 |

**500 Cow Operation**

|     | .75     | .85    | .95    | 1.05   | 1.15   | 1.25    |
|-----|---------|--------|--------|--------|--------|---------|
| 385 | -17,468 | 2,912  | 23,292 | 43,672 | 64,052 | 84,432  |
| 405 | -13,121 | 7,859  | 28,839 | 49,819 | 70,799 | 91,779  |
| 425 | - 8,775 | 12,805 | 34,385 | 55,965 | 77,545 | 99,125  |
| 445 | - 4,429 | 17,751 | 39,931 | 62,111 | 84,291 | 106,471 |
| 465 | - 82    | 22,698 | 45,478 | 68,258 | 91,038 | 113,818 |

**1000 Cow Operation**

|     | .75     | .85    | .95    | 1.05    | 1.15    | 1.25    |
|-----|---------|--------|--------|---------|---------|---------|
| 385 | -31,141 | 9,759  | 50,659 | 91,559  | 132,459 | 173,359 |
| 405 | -22,448 | 19,652 | 61,752 | 103,852 | 145,952 | 188,052 |
| 425 | -13,755 | 29,545 | 72,845 | 116,145 | 159,445 | 202,745 |
| 445 | - 5,062 | 39,438 | 83,938 | 128,438 | 172,938 | 217,438 |
| 465 | 3,631   | 49,331 | 95,031 | 140,731 | 186,431 | 232,131 |

**STEER CALF WEIGHT (LBS)**

1. Return on investment = total gross income less cash costs, non-cash costs, and family labor.
2. Price/lb. is given as steer calf prices, but computations consider all market animal prices (heifers, steers, bulls, and cull cows).
3. Weights are indicated as steer calf weights, but computations are based on weights of all market animals.

PERCENT RETURN ON INVESTMENT

MARKETING WEANER CALVES

Price/lb - Steer Calves

200 Cow Operation

|     | .75 | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|-----|------|------|------|
| 385 | -0- | -0- | 1.5 | 3.6  | 5.6  | 7.7  |
| 405 | -0- | -0- | 2.1 | 4.2  | 6.3  | 8.4  |
| 425 | -0- | 0.4 | 2.6 | 4.8  | 7.0  | 9.1  |
| 445 | -0- | 0.9 | 3.2 | 5.4  | 7.6  | 9.9  |
| 465 | -0- | 1.4 | 3.7 | 6.0  | 8.3  | 10.6 |

500 Cow Operation

|     | .75 | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|-----|------|------|------|
| 385 | -0- | 0.3 | 2.3 | 4.2  | 6.2  | 8.2  |
| 405 | -0- | 0.8 | 2.8 | 4.8  | 6.9  | 8.9  |
| 425 | -0- | 1.2 | 3.3 | 5.4  | 7.5  | 9.6  |
| 445 | -0- | 1.7 | 3.9 | 6.0  | 8.2  | 10.3 |
| 465 | -0- | 2.2 | 4.4 | 6.6  | 8.8  | 11.0 |

1000 Cow Operation

|     | .75 | .85 | .95 | 1.05 | 1.15 | 1.25 |
|-----|-----|-----|-----|------|------|------|
| 385 | -0- | 0.5 | 2.5 | 4.5  | 6.5  | 8.5  |
| 405 | -0- | 1.0 | 3.0 | 5.1  | 7.1  | 9.1  |
| 425 | -0- | 1.4 | 3.6 | 5.7  | 7.8  | 9.9  |
| 445 | -0- | 1.9 | 4.1 | 6.3  | 8.5  | 10.6 |
| 465 | 0.2 | 2.4 | 4.6 | 6.9  | 9.1  | 11.3 |

STEER CALF WEIGHT (LBS)

1. Return on investment - total gross income less cash costs, non-cash costs, and family labor.
2. Price/lb. is given as steer calf prices, but computations consider all market animal prices (heifers, steers, bulls, and cull cows).
3. Weights are indicated as steer calf weights, but computations are based on weights of all market animals.



## COST STUDY ASSUMPTIONS

As in any study, certain assumptions must be established that are typical of actual conditions. The following assumptions are based on averages of management practices, physical and economic factors of Modoc County. The same assumptions were used in all three ranch sizes (200, 500, and 1000 cows).

1. 80% calf crop marketed
2. 2% death loss of cows
3. 20% heifer replacement rate
4. 25% bull replacement rate
5. 16.7 cows per bull
6. Salt consumption - 2 oz. per day per cow
7. Public grazing fees - \$2.40 per AUM
8. Hay consumption - 2 tons per year per cow
9. Hay yields - Alfalfa - 4½ tons per acre  
Meadow - 2 tons per acre
10. Fertilizer costs - Alfalfa - \$7 per acre  
Meadow - \$19 per acre
11. Property tax rate - \$4.15/100 with 25% assessment ratio
12. Advalorem tax on bulls - \$3.85 per bull
13. Possessory Interest tax - 40¢ per AUM
14. Depreciation Rates - Improvements 4% of new cost  
Equipment 10% of new cost
15. Interest rates - Operating capital - 12%  
Investment 9%

## NOTES

- a. Cost and income figures per pound were calculated on total pounds of beef sold (calves, cull cows, and bulls).
- b. Labor includes employee benefits.
- c. Full time labor includes housing and meat.
- d. Equipment costs were derived from surveying dealers in Modoc County.

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