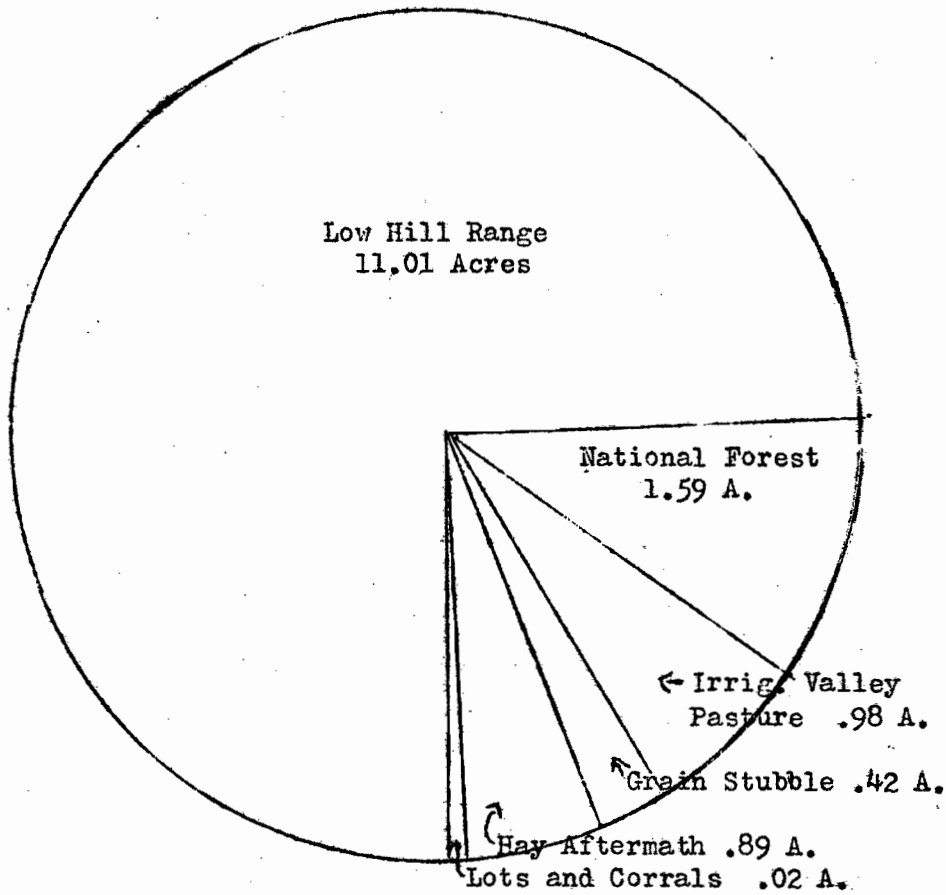


*as per
Sibberson
Scott Valley*

FIRST ANNUAL REPORT
OF THE
SCOTT VALLEY BEEF MANAGEMENT AND LAND UTILIZATION STUDY
FOR 1947
INCLUDING DATA ON THE KLAMATH NATIONAL FOREST

DISTRIBUTION OF 14.91 ACRES OF
LAND PASTURED PER ANIMAL UNIT



STUDY CONDUCTED BY
AGRICULTURAL EXTENSION SERVICE
Of The
UNIVERSITY OF CALIFORNIA AND U.S. DEPARTMENT OF AGRICULTURE
In Cooperation With
LOCAL CATTLEMEN

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UC Cooperative Extension

Introduction

This is the first annual progress report of the Scott Valley Beef Management and Land Utilization Study conducted by the Agricultural Extension Service. The purpose of this study is to obtain and make available to local cattlemen information which will help them in improving the profits in their cattle business. Records were completed this past year on four enterprises, one for the calendar year 1947, and the other three for the record year beginning May 1, 1947 and through April 30, 1948. Although the number is small and there is a slight difference in the record year covered, averages for these four beef cattle enterprises are shown along with the figures for the individual records in the following tables. This average, of course, applies only to the ranches covered and may or may not be typical of the local beef cattle business. It is anticipated that continuation of this study with more records over a longer period of time will turn up much valuable material and assist actual and prospective cattlemen in their management problems.

Beef Enterprise a Part of Ranch Business

To understand and apply these figures properly you must think of the beef cattle herd as a separate enterprise from the rest of the ranching business. The figures herein apply only to the beef enterprise, which is only a part of the total ranch business. These ranches are mainly beef ranches and in all cases involve the ownership of range or meadow pastures and the production of hay and sometimes other enterprises. But hay and pasture in these records are considered as produced in other enterprises and are charged to the beef cattle as hay and pasture at the going local value for such feed. Hence, these beef enterprise records show costs for the beef only, including the value of hay and pasture in the feed costs. The labor shown is only for the care and feeding of the beef herd. Much of the work of these ranches is in the production of hay, which is not shown directly, although the price at which the hay is charged to the stock should cover hay labor as well as other haying expenses and perhaps a profit on hay production.

Animal Unit the Basis of Comparison

Beef herds vary in the proportion of cows and young stock so to compare feed quantities, costs, production, etc., we must use one mature beef animal or its equivalent as the basis of comparison. This we call the animal unit, which is one head of cattle (cow, bull, or steer) over 2 years of age, 1 1/3 yearlings from 1 to 2 years of age, and 2 calves under a year. To get the total animal units in a herd we add the cows, bulls, 2-year old steers, half the calves, and three-quarters of the yearlings. Most of our figures in the following tables are on an animal unit basis. Breeding cows are used mainly for comparing calving percentage which is shown in table 1.

Nature of the Local Beef Business

For the benefit of other than local readers we give this brief explanation of the kind of business covered by these records. The four enterprises covered were located in Scott Valley near the town of Etna. Three of them used natural low hill range, grazing allotments in the National Forest, irrigated valley pasture, grain stubble and hay aftermath. The fourth record used the same types except that it had no National Forest grazing allotment. There is little summer rainfall in this

area so that summer feeding of cattle is either on irrigated pastures or National Forest grazing allotments in the higher mountains nearby. Winters are severe enough to necessitate the feeding of considerable hay during the winter months. This hay is produced locally on these ranches in irrigated wild hay meadows and alfalfa fields. The usual feed cycle starts in the spring on the low hill ranges and irrigated valley pastures. In July those animals for which there are allotments in the National Forest are moved to such range and most of the animals in the natural low hill range are moved either to the forest or to valley irrigated pastures. Animals in the National Forest come out early in October and are placed with other cattle in grain stubble and hay meadows. Feeding of hay usually begins in December & is in the various fields in connection with pasture as well as in field lots and corrals. Considerable detail was obtained on the four records this past year on the feed obtained from the various types of pastures, as shown in tables 2 to 6.

Net Income or Profit

The net income or profit earned by an enterprise is the difference between income and expense. Since accounting for different purposes may follow slightly different methods, the computed profit may not always be the same. In these records a uniform method of calculation was followed throughout so the relative profit in comparing different enterprises will show the relative efficiency or earning ability even though the exact figures may not check with those arrived at in the individual's personal accounting system. Some producers want as a profit the figure by which their income exceeds their actual cash outlay; others want their income above outlay minus their own wages for work done. In order to supply a number of earning figures the following standard measures of net income are used in this report.

Management Income is the amount by which total income exceeds total costs, with costs including the wages of the operator for work actually done, depreciation on facilities and interest on investment. This is the amount left to reimburse the operator for his skill in management after all expenses have been met. If a loss occurs, it will be indicated by a minus sign (-) in front of the management income figure.

Labor Income is the management income plus value of the operator's labor previously included as an expense. It is the operator's return for his labor and management.

Capital and Management Income is the management income plus the interest on investment previously included as such in the expense. It is the amount the producer can consider his return for management and invested capital. It is not shown in this report but may easily be computed by adding the proper figures.

Farm Income is the labor income plus interest on investment. It is the total amount receivable from the enterprise after meeting cash costs, the value of farm-produced feeds, and depreciation on facilities. It includes a profit for skill in management, wages for labor performed, and interest on capital invested. It is the amount the operator can safely withdraw from the business to live on and pay interest and principal on indebtedness, if any. Interest actually paid is not recognized in these costs, it being assumed that the interest computed on the investment could cover interest on borrowed capital, as well as that invested by the operator.

Total Farm Income is the farm income for the beef enterprise plus the interest on owned range, which was included as a part of the pasture cost in computing the beef record. This is the total amount the cattleman, who is out of debt and has no interest to pay, makes from his combined beef cattle and range enterprises. This does not include earnings from his hay production. UC Cooperative Extension

TABLE I MAIN PROFIT DETERMINING FACTORS AND EARNINGS PER ANIMAL UNIT

| | 2 | 3 | 1 | 4 | Av. |
|-----------------------------------------------------------|----------|---------|---------|---------|----------|
| Pounds produced per animal unit | 551 | 384 | 348 | 341 | 386 |
| Pounds sold per animal unit | 1496 | 517 | 699 | 277 | 567 |
| Calves raised per 100 breeding cows | 90 | 78 | 62 | 77 | 76 |
| Animal units per cow | 5.9 | 2.4 | 2.0 | 2.1 | 2.4 |
| Net head raised per 100 An. Units | 15 | 32 | 32 | 36 | 31 |
| Head (other than calves) died per 100 animal units | 4.1 | 10.2 | 2.9 | 6.2 | 7.4 |
| Main kind of beef animals sold | 2 Yr.S. | 2 Yr.S. | Cows | Yr. S. | 2 Yr. S. |
| % of total sales money from above | 43% | 49% | 49% | 29% | 41% |
| Average weight of above | 980 | 980 | 1037 | 917 | 997 |
| Aver. price cwt of above | \$22.10 | \$20.26 | \$19.01 | \$24.28 | \$21.53 |
| Average price per head | 217.00 | 199.00 | 197.00 | 223.00 | 215.00 |
| Av. price per cwt. all stock sold | \$20.75 | \$20.88 | \$21.14 | \$22.32 | \$21.12 |
| Av. value per cwt. all stock prod. | 25.69 | 20.45 | 25.09 | 20.26 | 21.67 |
| Net cost of production per cwt. | 13.61 | 14.81 | 21.12 | 20.98 | 17.03 |
| Management income per cwt. | 12.08 | 5.64 | 3.97 | .72 | 4.64 |
| Value stock produced per an. un. | \$141.63 | \$78.60 | \$87.39 | \$69.15 | \$83.56 |
| Net cost of production per an. un. | 75.03 | 56.93 | 73.56 | 71.60 | 65.67 |
| Management income per an. un. | 66.60 | 21.67 | 13.83 | 2.45 | 17.89 |
| Add-Value operator's labor | 3.58 | .48 | 3.60 | 2.67 | 1.89 |
| Labor income per animal unit | 70.18 | 22.15 | 17.43 | .22 | 19.78 |
| Add interest on invest. beef only | 6.88 | 8.16 | 8.73 | 7.89 | 7.97 |
| Farm income per animal unit | 77.06 | 30.31 | 26.16 | 8.11 | 27.75 |
| Add interest on owned range | 8.21 | 8.43 | 5.75 | 5.70 | 7.21 |
| Total farm income per animal unit beef enterprise & range | 85.27 | 38.74 | 31.91 | 13.81 | 34.96 |

The four individual records for 1947 are listed above in order of management income per animal unit from left to right followed by the average in the last column.

Production per average animal unit for the year in total pounds of live beef animals is the most important profit factor. No. 2 is unusually high with 551 lbs. total or 1.51 lbs. per animal unit day. This enterprise consisted largely of purchase and pasture feeding for resale with large turnover during the year and a relatively small cow herd. The other 3 records all had relatively good production per animal unit with most of the stock from their own cow herds. Notice that records 2, 3, and 1 sold much more in pounds than they produced during the year while No. 4 sold less than was produced. Since inventory values are less than selling prices this disparity between quantity produced and sold causes the first 3 records to show an abnormally high profit this last year and No. 4 to show a small loss. Records were also figured with inventories at market value which increased the profit a little in all records but did not change the relative standing as a profit among the 4 herds.

TABLE 2 INPUTS AND COSTS PER ANIMAL UNIT

| | 2 | 3 | 1 | 4 | Av. |
|----------------------------------------|----------|----------|----------|----------|----------|
| Total acres pastured, all kinds | 22.0 | 9.2 | 14.4 | 20.1 | 14.9 |
| Animal unit months of pasture | 10.3 | 9.8 | 7.7 | 9.1 | 9.4 |
| Pounds of hay fed | 906 | 2082 | 2626 | 2405 | 2108 |
| Pounds of grain and concentrates | 283 | 2 | 110 | 48 | 61 |
| Pounds of salts and minerals | 20 | 34 | 23 | 14 | 24 |
| Hours of hired labor | 2.2 | 5.8 | 5.1 | 6.9 | 5.7 |
| Hours of operator's labor | 3.6 | .7 | 3.5 | 2.7 | 2.0 |
| Total hours per animal unit | 5.8 | 6.5 | 8.6 | 9.6 | 7.7 |
| Av. cost of pasture per An. Un. Mo. \$ | 3.00 | \$ 1.88 | \$ 2.24 | \$ 2.17 | \$ 2.15 |
| Av. cost of hay per ton | 23.95 | 17.01 | 20.00 | 20.00 | 18.88 |
| Av. cost of grain etc. per cwt. | 3.00 | 3.13 | 3.00 | 3.00 | 3.00 |
| Av. cost per hour of hired labor | 1.00 | .74 | 1.11 | 1.00 | .89 |
| Costs per animal unit for the year | | | | | |
| Low hill range | \$ 9.02 | \$ 2.49 | \$ 3.81 | \$ 8.05 | \$ 5.29 |
| National forest grazing fee | .00 | .36 | .83 | .59 | .44 |
| Valley irrigated pasture | 18.64 | 9.50 | 10.32 | 8.17 | 10.19 |
| Grain stubble | 1.71 | 2.03 | .52 | .76 | 1.41 |
| Hay aftermath | 1.44 | 4.06 | 1.79 | 2.15 | 2.89 |
| Total range and pasture | 30.81 | 18.44 | 17.27 | 19.72 | 20.22 |
| Hay | 10.83 | 17.71 | 26.25 | 24.05 | 19.90 |
| Grain and concentrates | 8.48 | .07 | 3.30 | 1.43 | 1.83 |
| Salt and minerals | .93 | 1.04 | .33 | .14 | .65 |
| Total feed cost per An. unit | 51.05 | 37.26 | 47.15 | 45.34 | 42.60 |
| Cost of hired labor | 2.22 | 4.37 | 5.63 | 6.91 | 5.11 |
| Value of operator's labor | 3.58 | .48 | 3.60 | 2.67 | 1.89 |
| Est. cost of saddle & pack horses | 2.35 | 1.39 | 2.58 | 1.10 | 1.52 |
| Automobile and truck | 2.97 | .49 | 1.52 | 3.83 | 2.03 |
| Miscel. taxes, ins., etc. | 3.16 | 3.29 | 1.98 | 1.58 | 2.55 |
| Depreciation on bldg., fences, etc. | 2.82 | 1.49 | 2.37 | 2.28 | 2.00 |
| Int. on beef enterprise invest. | 6.88 | 8.16 | 8.73 | 7.89 | 7.97 |
| Total expenses of production | \$ 75.03 | \$ 56.93 | \$ 73.56 | \$ 71.60 | \$ 65.67 |

An "input" is something used in production such as pasture, hay, labor, etc. The quantity and proportion of inputs, and the prices of these inputs determine costs. And costs are most important in determining profit. Cost factors are shown above in some detail along with costs per average animal unit for the year.

No. 2 used more pasture and grain and less hay and labor than the other 3 records. But most of this pasture was irrigated pasture which is more expensive than other kinds so this record shows highest feed and total costs per animal unit. But high production more than offset the higher cost.

No. 3 has the lowest feed and total costs per animal unit with less hay, concentrates and labor used and more of the cheaper kinds of pasture. Prices per ton of hay, per animal unit month of pasture, and per hour of labor also contributed to lower costs.

TABLE 3 FEED UTILIZED BY SOURCE AND COST

| | 2 | 3 | 1 | 4 | Av. 4 Herds |
|----------------------------------------------------------|---------|---------|---------|---------|-------------------|
| Animal unit months of feed per animal unit from: | | | | | |
| Low hill range | 3.56 | 1.27 | 1.89 | 2.88 | 2.2 |
| National forest | .00 | .92 | 2.32 | 1.58 | 1.2 |
| Valley irrigated pasture | 5.69 | 4.33 | 2.64 | 3.18 | 3.9 |
| Grain stubble | .52 | 1.15 | .16 | .38 | .7 |
| Hay aftermath | .50 | 2.12 | .71 | 1.08 | 1.4 |
| Total pasture | 10.27 | 9.79 | 7.72 | 9.10 | 9.4 |
| Hay | 1.13 | 2.60 | 3.27 | 3.00 | 2.6 |
| Grain and concentrates | .53 | .01 | .21 | .09 | .1 |
| Total feed | 11.93 | 12.40 | 11.20 | 12.19 | 12.1 |
| Percent of total feed from: | | | | | |
| Low hill range | 29.9 | 10.2 | 16.9 | 23.6 | 17.7 |
| National Forest | 0.0 | 7.5 | 20.6 | 13.0 | 9.7 |
| Valley irrigated pasture | 47.7 | 34.9 | 23.5 | 26.2 | 32.3 |
| Grain stubble | 4.3 | 9.3 | 1.4 | 3.1 | 5.9 |
| Hay aftermath | 4.2 | 17.1 | 6.4 | 8.8 | 11.8 |
| Total pasture | 86.1 | 79.0 | 68.8 | 74.7 | 77.4 |
| Hay | 9.5 | 21.0 | 29.3 | 24.6 | 21.7 |
| Grain and concentrates | 4.4 | .0 | 1.9 | .7 | .9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Cost per animal unit month of feed from various sources. | | | | | |
| Low hill range | \$ 2.54 | \$ 1.97 | \$ 2.01 | \$ 2.79 | \$ 2.46 |
| National forest (rental charges only) | ---- | .39 | .36 | .37 | .38 |
| Valley irrigated pasture | 3.28 | 2.20 | 3.91 | 2.57 | 2.59 |
| Grain stubble | 3.31 | 1.77 | 3.27 | 2.00 | 1.97 |
| Hay aftermath | 2.87 | 2.00 | 2.50 | 2.00 | 2.01 |
| Average all pasture | \$ 3.00 | \$ 1.88 | \$ 2.24 | \$ 2.17 | \$ 2.15 |
| Hay | 9.54 | 6.80 | 8.00 | 8.00 | 7.55 |
| Grain and concentrates | 16.02 | 17.00 | 15.86 | 15.87 | 15.92 |
| Average of all incl. salt, etc. | \$ 4.28 | \$ 3.13 | \$ 4.21 | \$ 3.72 | \$ 3.50 |

The first section of the above table shown the animal unit months of feed per average animal unit for the year. There would ordinarily be just 12 animal unit months per animal unit year but there were slight differences in recording animal unit months of feed on the various pastures. The individual ranches don't exactly add up, but are close enough. These figures are highly significant in showing the sources of all feed, for the year. The second section of the table shows the per cent of all feed during the year from each source. The 3rd section shows the direct cost of each type of feed per animal unit month. To feed an animal unit one month cost on the average 38 cents in the national forest, \$2.59 in valley irrigated pasture and \$7.55 for hay. Obviously the more the pasture and range and the less the hay and grain the lower will be the feed cost for the year. The hay and grain shown above were in part fed in the various pastures as supplemental feed and part in feed lots as shown in table 5.

TABLE 4 ACRES USED PER ANIMAL UNIT WITH PRODUCTION
AND CARRYING CAPACITY PER ACRE

| | 2 | 3 | 1 | 4 | Av. |
|---------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|
| Acres used per animal unit year | | | | | |
| Low hill range | 19.83 | 5.57 | 8.61 | 15.71 | 11.01 |
| National forest "surface grazing acres" | .00 | 1.10 | 3.59 | 2.22 | 1.59 |
| Valley irrigated pasture | 1.53 | .93 | 1.16 | .87 | .98 |
| Grain stubble | .34 | .51 | .25 | .37 | .42 |
| Hay Aftermath | .41 | 1.04 | .82 | .98 | .98 |
| Total acres pasture | 21.99 | 9.15 | 14.43 | 20.06 | 14.89 |
| Feed lots and corrals | .03 | .02 | .07 | .02 | .02 |
| Total acres used | 22.02 | 9.17 | 14.50 | 20.08 | 14.91 |
| Animal unit days of feed per acre - net, without supplement | | | | | |
| Low hill range | 5.4 | 6.8 | 6.6 | 5.5 | 6.0 |
| National Forest | 0.0 | 25.2 | 11.3 | 21.3 | 21.9 |
| Valley irrigated pasture | 121.0 | 150.3 | 68.0 | 110.2 | 119.7 |
| Grain stubble | 46.5 | 68.7 | 18.9 | 30.8 | 51.3 |
| Hay aftermath | 36.3 | 61.4 | 26.1 | 36.2 | 48.3 |
| Average all acres pastured | 14.1 | 32.1 | 16.2 | 13.5 | 18.9 |
| An. unit days of supplemental feed per acre while grazing on various types of pasture | | | | | |
| Low hill range | 1.0 | 0.0 | 0.0 | 0.0 | .3 |
| Nat'l forest (usually enroute) | 0.0 | .8 | .3 | .7 | .6 |
| Valley irrigated pasture | 15.6 | 0.0 | 2.2 | 49.1 | 17.7 |
| Grain stubble | 4.2 | 14.7 | 12.0 | 0.0 | 9.0 |
| Hay aftermath | 16.3 | 33.6 | 6.5 | 21.9 | 26.1 |

The first section shows the total acreage utilized during the year per average animal unit in the herd for the year. Different kinds of range and pasture are mainly used in season at certain times of the year. There may have been times when parts of the herd were on several types of pasture.

Low hill range is used largely in the early spring although some was low enough to furnish winter range and some high enough to use only in late spring and early summer. Average use was 11 acres an animal unit and production was 6 animal unit days per acre. Table 3 shows it furnished about 18% of the total feed for the year or all the feed for the herd for 2.2 months.

National forest is in surface grazing acres, the net usable portion of the assigned allotment. This varied from 1.1 to 3.6 acres per average animal unit in the herd, and furnished during the 3 month season of use an average of 21.9 animal unit days of feed per grazing acre.

Valley irrigated pasture furnished an average of 112.7 animal unit days of feed per acre and there was almost an acre used per animal unit so it fed the herd the equivalent of 4 months of the year.

Grain stubble and hay aftermath show highly variable carrying capacity but together were used to provide the feed for about 2 months of the year usually in fall and early winter but some in the spring.

The last section of the table shows the amount of hay and grain supplement which were fed stock in various pastures. Herd #2 fed considerable but this was mainly a steer feeding enterprise. Hay aftermath shows a high percent of supplement feeding since such fields continued in use into the winter after hay feeding started.

TABLE 5 ALLOCATION OF BEEF PRODUCTION TO FEED SOURCES

| | 2 | 3 | 1 | 4 | Av. |
|----------------------------------------|-----|-----|-----|-----|-----|
| Pounds produced per animal unit from: | | | | | |
| Low Hill range | 156 | 98 | 58 | 86 | 97 |
| Supplemental feed on hill range | 29 | 0 | 0 | 0 | 3 |
| National forest | 0 | 14 | 135 | 99 | 53 |
| Supplement on national forest | 0 | 0 | 2 | 3 | 2 |
| Valley irrigated pasture | 268 | 188 | 112 | 67 | 149 |
| Supplements on irrigated pasture | 35 | 0 | 4 | 30 | 15 |
| Grain stubble | 36 | 4 | 8 | 9 | 10 |
| Supplement on grain stubble | 3 | 1 | 5 | 0 | 1 |
| Hay aftermath | 17 | 23 | 28 | 16 | 20 |
| Supplements on hay aftermath | 7 | 12 | 7 | 10 | 10 |
| Hay and grain in feed lot | 0 | 44 | -11 | 21 | 26 |
| Total lbs. produced from pasture | 477 | 327 | 341 | 277 | 329 |
| Total lbs. produced from hay and grain | 74 | 57 | 7 | 64 | 57 |
| Total pounds produced per animal unit | 551 | 384 | 348 | 341 | 386 |
| Pounds produced per acre of pasture | | | | | |
| Low hill range | 8 | 18 | 7 | 5 | 9 |
| National forest "Surf. Graz." acre - | | 13 | 38 | 44 | 33 |
| Valley irrigated pasture | 189 | 218 | 96 | 78 | 151 |
| Grain stubble | 108 | 8 | 33 | 18 | 24 |
| Hay aftermath | 40 | 22 | 34 | 24 | 23 |

Total beef produced during the year has been allocated to each type of feed by actual or estimated weights of animals, as they went on and off each type of feed. The supplemental feed for animals on pasture was assumed to contribute the same proportion of gain as that feed was of the total estimated feed, both pasture and supplement. The first section of the table above shows the production in pounds of live weight per average animal unit for the year as associated to each type of pasture and to supplement hay and grain. Notice that No. 1 shows a net loss in the feed lot as a result of feeding there in the winter months and the feed not being adequate to maintain weights. No. 2 didn't use the feed lot, doing all supplemental feeding in pastures and hay fields.

The second part of the above table shows production or gains per acre for each type of pasture. Pasture conditions and rate of stocking vary widely, so the above average should not be considered representative. Remember that pastures maintain animals as well as contribute to gains in weight. It might be possible to stock a good pasture so heavily that animals made no gains at all while the same pasture under lighter stocking might produce 400 pounds per acre. Valley irrigated pastures above are shown to have produced from 78 pounds per acre in No. 4 to a high of 218 in No. 3. This is from pasturage alone without the gain attributed to hay and grain. Records are available showing gains in the best irrigated pastures as high as 500 lbs. per acre for the season.

TABLE 6 COSTS, PRODUCTION, & RETURNS FROM NATIONAL FOREST
GRAZING ALLOTMENT (JULY-OCTOBER)

| | 3 | 1 | 4 | Aver. 3 Herds |
|---------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|---------------------|
| All cash costs per animal unit for cattle using the forest during allotted period: | | | | |
| Labor | \$ 4.55 | \$ 2.20 | \$ 5.20 | \$ 3.97 |
| Provisions | .98 | .73 | 1.00 | .90 |
| Horses | .98 | .55 | 1.12 | .87 |
| Pack animals | 1.05 | .51 | .29 | .62 |
| Feed: salt | .13 | .06 | .02 | .07 |
| Hay | .88 | .31 | .61 | .60 |
| Grain | .22 | .18 | .26 | .22 |
| Equipment: bells | .10 | .04 | .03 | .06 |
| Truck and car | .41 | .71 | .44 | .52 |
| Grazing fee | 1.18 | 1.05 | 1.03 | 1.08 |
| Total cash costs per animal unit (not including interest, depreciation) | 10.40 | 6.34 | 10.00 | 8.91 |
| Number of trips made to mountains | 4 | 5 | 4 | 4 |
| Death loss -% of head that died while in mountains | 1.5% | 0% | 2% | 1.2% |
| Aver. No. of feed days per animal Un | 94 | 88 | 85 | 89 |
| Cost per animal unit month | 3.36 | 2.16 | 3.52 | 3.01 |
| Pounds of beef produced per animal Un | 33.3 | 171.2 | 176.6 | 127.0 |
| Pounds of beef produced per animal unit per day | .35 | 1.94 | 2.08 | 1.43 |
| Cost of producing 100 lbs. of beef | \$ 31.53 | \$ 3.70 | \$ 5.66 | \$ 13.63 |
| Aver. value per animal unit returned from forest | \$ 165.42 | \$ 189.11 | \$ 178.29 | \$ 177.61 |
| Aver. value per An. Un. turned on forest | 148.48 | 152.90 | 146.86 | 149.41 |
| Gross return per animal unit | \$ 16.94 | \$ 36.21 | \$ 31.43 | \$ 28.20 |
| Less costs per animal unit | 10.40 | 6.34 | 10.00 | 8.91 |
| Net return per animal unit | \$ 6.54 | \$ 29.87 | \$ 21.43 | \$ 19.29 |
| Surface acres of grazing land per animal unit in allotment | 3.6 | 4.5 | 3.9 | 3.9 |
| Pounds of beef produced per acre, net | 13. | 38. | 44. | 33. |
| Net return per acre from beef produced | \$ 1.80 | \$ 6.61 | \$ 5.53 | \$ 3.33 |
| Animal unit feed days per acre | 26 | 20 | 22 | 23 |
| % of feed furnished by forest allotments compared to total feed requirements for the ranch operation | 7.5% | 20.6% | 13.0% | 10.9% |
| % of beef produced by forest allotment as compared to total beef produced by the ranch operation | 3.6% | 38.6% | 29.0% | 16.5% |

The above table indicates the cash costs of operating cattle in the Klamath National Forest from Scott Valley. It can be used to some extent in weighing costs of valley pasture against mountain pasture and deciding which is the more economical operation. The results indicate that the cattle made gains in the mountains comparable to valley pasture and at a cost less than the going price of \$4.00 per animal unit month. Record 3 ran mostly dry cows in the mountains while records 1 and 4 had cows and calves. Record 3 does not have as great a production per animal unit, since it does not have the advantage of calf gains which are large.

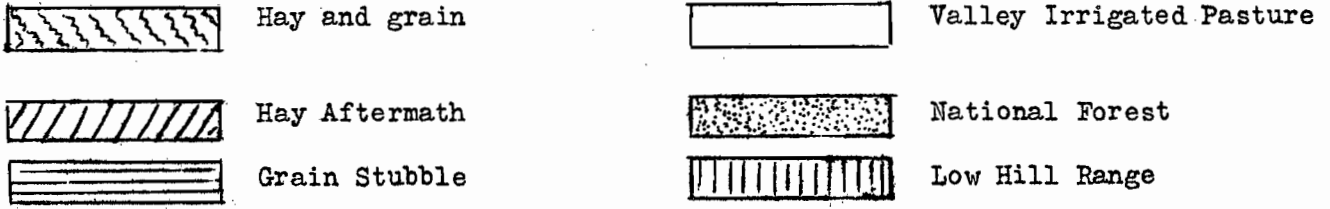
From the standpoint of land utilization, the income and production per acre indicates that the forest grazing land is being used to good advantage in producing beef.

TABLE 7 PRICES AND COSTS PER HUNDREDWEIGHT

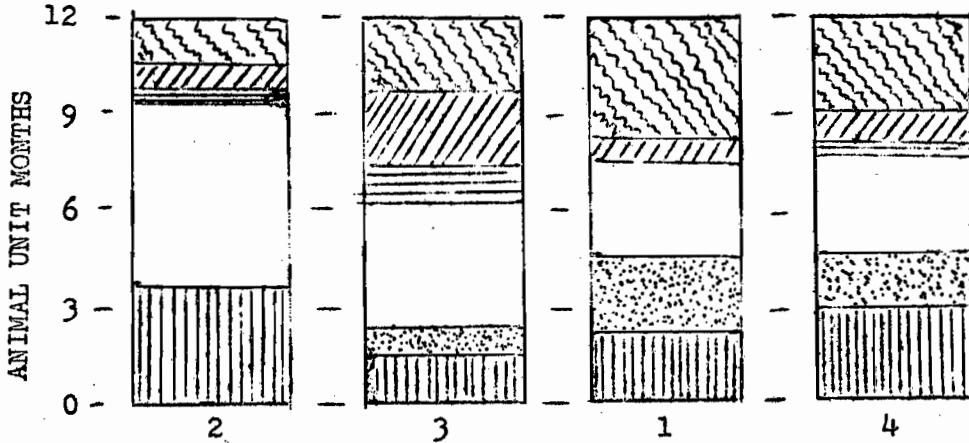
| | 2 | 3 | 1 | 4 | Av. 4 Herds |
|--------------------------------------|---------|----------|----------|----------|-------------------|
| Pounds produced per animal unit | 551 | 384 | 348 | 341 | 386 |
| Pounds sold per animal unit | 1496 | 517 | 699 | 277 | 567 |
| Av. selling prices per hundredweight | | | | | |
| Cows | \$16.57 | \$ 18.91 | \$ 19.01 | \$ 18.86 | \$ 18.39 |
| Calves | 21.10 | --- | --- | 19.61 | 21.01 |
| Yearling steers | --- | 25.00 | 24.00 | 24.38 | 24.66 |
| 2 - Yr. old steers | 22.10 | 20.26 | 24.00 | 24.29 | 21.53 |
| 3 - Yr. old steers | 21.86 | --- | --- | --- | 21.86 |
| Inventory value per cwt. close year | 16.28 | 15.50 | 15.13 | 15.18 | 15.42 |
| Average value per cwt. produced | 25.69 | 20.45 | 25.09 | 20.26 | 21.67 |
| Costs per cwt. produced | | | | | |
| Hay | \$ 1.96 | \$ 4.60 | \$ 7.54 | \$ 7.05 | \$ 5.16 |
| Concentrates | 1.54 | .02 | .95 | .42 | .47 |
| Pasture | 5.59 | 4.80 | 4.96 | 5.78 | 5.24 |
| Salt and minerals | .17 | .27 | .09 | .04 | .17 |
| Total feed cost per cwt. | 9.26 | 9.69 | 13.54 | 13.29 | 11.04 |
| Hired labor | .40 | 1.14 | 1.62 | 2.02 | 1.32 |
| Operator's and family labor | .65 | .12 | 1.03 | .78 | .49 |
| Horse and auto use | .97 | .49 | 1.17 | 1.44 | .93 |
| Miscl. taxes and insurance | .57 | .86 | .57 | .46 | .66 |
| Depreciation | .51 | .39 | .68 | .68 | .52 |
| Interest on investment | 1.25 | 2.12 | 2.51 | 2.31 | 2.07 |
| Total production cost | \$13.61 | \$ 14.81 | \$ 21.12 | \$ 20.98 | \$ 17.03 |
| Management income per cwt. | 12.08 | 5.64 | 3.97 | -.72 | 4.64 |
| Total farm income per cwt. | 15.47 | 10.07 | 9.16 | 4.04 | 9.07 |

Beef sold in any year is in part from production of previous years and some beef produced in any year is not always sold that year but carried over through the closing inventory. In figuring these records stock is carried in the inventories at a little less than current market prices in order to avoid taking a future book loss through deaths or market declines, particularly on the basic breeding herd and stock not ready for market. Hence the average value per cwt. produced is influenced not only by current selling prices but also by inventory values and the kind of animals kept. A 100 lb. gain on a cow would not be worth as much as an equivalent gain on a weaner or yearling steer. No. 2 which is largely a feeding enterprise shows a high value per hundredweight of beef produced because of the good margin between purchase and selling price of stock bought, fed and then sold. No. 1 shows a high value per cwt. produced because a large part of sales were of cattle carried in the opening inventory at lower values per cwt. No. 4 shows a low value per cwt. produced because much of the production was cows, not sold and carried in closing inventory at rather low values per cwt. No. 3 had a below average value per hundredweight produced due to a number of factors such as some purchases at good prices and some sales at below average prices.

KINDS OF FEED USED

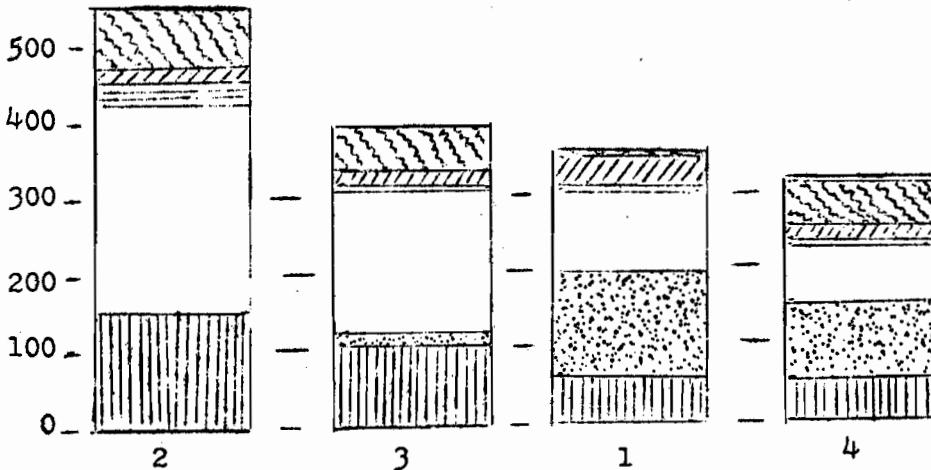


Feed used on 4 Local Cattle Ranches in Animal Unit Months per average Animal Unit for year and in per cent of total



See how feed sources vary - No. 2 with no national forest got most of feed from valley irrigated pasture and low hill range. Irrigated pasture and hay aftermath were main sources for no.3 Hay and grain and irrigated pasture were most important for nos. 1 and 4.

Pounds of Beef Produced per Animal Unit as credited to kinds of feed.



No. 2 with very high production per animal unit got most of the grains from low hill range and irrigated pasture. These were also most important sources of gain to no. 3. No. 1 got most of the gains from the National Forest with irrigated pasture next. No. 4's gains were almost equally divided over 4 main feed sources.