

BF-SI-72

BEEF PRODUCTION
RIVERSIDE COUNTY - 1972

During the past years, 225,000 to 300,000 head of beef cattle have been marketed annually from Riverside County feedlots. Many of the animals were purchased as calves and/or yearlings from the southwest range states of Arizona, Texas, New Mexico, and Oklahoma. These stocker and feeder animals arrive at weights ranging from 300 to 700 pounds. Cattle are received throughout the entire year; however, the bulk of animals arrives during the fall and spring months.

The heavier calves and yearlings generally go directly onto a fattening program where they are fed a 60 to 90 percent concentrate ration until they reach the desired grade and yield and weigh about 1,000 to 1,100 pounds. Lighter weight, younger calves are placed on various growing programs until they increase their body weight to 550 to 600 pounds.

GROWING CATTLE

Growing programs are accomplished by the drylot feeding of green feeds (winter cereals, sudan, alfalfa, etc.), hay and silage with or without varying amounts of concentrates; by pasture programs (grassy alfalfa fields, cotton stocks, sudan grass, or winter small grains and Bermuda) properly supplemented; or by various combinations of each.

Each cattle feeder must determine the productivity of his land, his most efficient method of operation, and the management and feeding programs necessary for the production of economical gains. Cattle of the correct age, weight, and condition must be purchased to best utilize the feeds available.

Drylot Programs

Feeders with highly productive soils may find pen feeding the best method. By following this program they produce maximum pounds of beef per acre, allot a minimum of productive land to cattle pens, and make maximum use of labor and equipment. In addition, they are better able to control planting, irrigating, and crop harvesting dates, and have fewer soil management problems. Nutritional programs usually include a minimum of one-half pound grain per hundred pounds body weight, five pounds dry hay, and free choice green chop, wilt chop or silage.

Utmost consideration in a drylot growing program must be given to equipment costs. The necessary choppers, wagons, tractors, etc., for a 1,000 head capacity lot may represent an investment of \$20,000 to \$35,000. Investment in corrals and chutes will require an additional \$15 to \$30 per head. Feeding and milling equipment usually represents an investment of \$10 to \$20 per head. Such expenses must, of course, be borne by relatively large numbers of cattle over a period of several years.

Older, more mature calves are better adapted to a drylot green feed program. These animals have a fully developed digestive system enabling them to consume large quantities of roughage. Typical wilt chop programs (supplemented and unsupplemented) are shown in Table I. The use of supplements depends upon the relative cost per unit of net energy between concentrates and roughages.

TABLE I - - WILT CHOP - 200# net gain; Starting Weight 400#
Finished Weight 600#

	<u>Unsupplemented</u>	<u>Supplemented</u>
Average daily gain, lbs.	1.6	2.0
Feed consumption:		
Alfalfa Wilt Chop (35% DM), lbs.	4615	3380
Cost @ \$12/ton	\$27.67	\$20.28
Oat Hay, lbs.	725	480
Cost @ \$32/ton	11.60	7.68
Concentrates, lbs.	-	320
Cost @ \$55/ton	-	8.80
Total lbs. consumed	5340	4180
Cost of feed consumed, \$	\$39.29	\$36.76
Feed to regain purchase weight	2.07	1.80
Death loss, 2%	3.04	3.04
Interest 8%: Cattle	4.65	3.83
Feed	1.20	.92
Medication & Processing	2.89	2.95
Taxes	.70	.57
Depreciation & Repairs	1.97	1.71
Total Cost/head, \$	\$55.81	\$51.58
Break even Cost/lb. gain, cents/lb.	.2790	.2579

TABLE II - - MILLED FEED - (250# gained); Starting Weight 350# or lower
Finished Weight 600#

	<u>A</u>	<u>B</u>
Rations used:		
Ratio concentrate to roughage, %	40:60	70:30
NE _m and NE _p	66.6:35.0	75.3:44.0
Average daily gain	1.74	2.33
Days on feed	143	107
Feed consumed daily, lbs.	13.58	13.25
Percent feed to average body weight	2.86	2.79
Feed consumed, lbs.	1951	1422
Cost/ton of feed, \$		
(includes \$10/ton mfg. & other costs)	\$52.00	\$59.50
Feed/lb. gain, lbs.	7.8:1	5.7:1
Cost/lb. gain, cents	.203	.169
Cost of feed consumed, \$	\$50.72	\$42.30
Death loss, 1% - \$/head	1.40	1.40
Interest, 8%: Cattle	4.36	3.28
Feed	.63	.49
Taxes	.71	.53
Medication & Processing	3.35	3.65
Total Costs/head	\$61.17	\$51.65
Break even Costs/lb. gain, cents/lb.	.2447	.2066

Young cattle may not have the digestive capacity to consume large quantities of low energy value roughages. They usually require a ration of higher quality with more concentrates and less roughage than older cattle. Roughage rations without some concentrates will not produce the desired gain in young calves. When thin cattle of different ages are placed in the drylot for the first time, it will be found that the larger capacity of the older steers gives them a decided advantage over the younger cattle, with the result that they gain much more rapidly. Two examples of commonly used milled rations for young cattle are shown in Table II.

Pasture Programs

Generally, pastures fall into two distinct categories, temporary and permanent. Temporary pastures should be considered as green feeds (produced) and crop refuse (field clean-up). The availability of temporary pasturage varies from year to year and season to season. When well-planned and managed, a properly rotated temporary pasture (winter cereals and summer sudan) may provide maximum TDN per acre. Total production costs will range from \$100 to \$120 per acre annually. Permanent pastures (Bermuda and alfalfa) on the other hand, are considered as year-round feed producing crops and will have only one cost for the establishment of a stand.

The making of profit from beef cattle on pasture depends on; 1) how little the pasturage costs, 2) the kind and number of cattle carried, and 3) how good a job is done of managing both the cattle and the pasture. The calculations made in Table III show the range in cost/cwt of body weight gain under various stocking rates and average daily gains for animals on pasture costing \$113 per acre to produce. One hundred and eighty days were assumed as the grazing time.

TABLE III

COSTS PER CWT OF GAIN ON PASTURE WHEN STOCKING
RATE AND AVERAGE DAILY GAIN VARY
(*\$113/acre production costs*)

(Steers per Acre)
180 days

	2.00	2.50	3.00	3.50	4.00	4.50	5.00
<i>Average Daily Gain</i>							
1.0	31.38	25.10	20.92	17.93	15.69	13.95	12.55
1.2	26.15	20.92	17.43	14.94	13.07	11.62	10.46
1.4	22.41	17.93	14.94	12.81	11.21	9.96	8.97
1.6	19.61	15.69	13.07	11.21	9.81	8.72	7.84
1.8	17.43	13.93	11.62	9.96	8.72	7.75	6.97
2.0	15.69	12.55	10.46	8.97	7.84	6.97	6.28

A pasture program can be a profitable method of reclaiming salty soils or of utilizing soils not productive enough for intensive field or vegetable crops. On the other hand, recent studies indicate that a pasture program on highly productive soils may yield as much as 2,000 pounds of beef per acre under the best management conditions, making such a program competitive with many intensive crops.

FATTENING CATTLE

The agricultural and natural resources found in Riverside County are well adapted to the feedlot finishing of fat beef cattle. Because of low rainfall, sparsely populated desert valleys especially are endowed with an ideal climate which permits the development of year-round feeding programs. In addition, the sandy soils offer a solution to drainage or moisture problems resulting from large concentrations of animals in a restricted pen space (100 to 150 square feet per head). Also, this area is ideally located between the cow-calf ranges of the southwest and the densely populated metropolitan areas of California and Arizona.

Following 1945, beef production became an important part of the wealth-creating agricultural enterprises in Riverside County. The industry commenced to loom large in the economy when cattle numbers and valuation rose from 25,500 head and \$3,625,000 in 1945 to 301,302 head and \$33,625,000 in 1963. Last year the sale of fat beef animals accounted for more than 25 percent of the county's cash receipts from poultry and animal marketings, 28.5 million dollars and 221.4 thousand head.

Animals are confined to feedlots with total capacities ranging from 1,000 to 30,000 head. The techniques and methods of fattening cattle and the development of specialized equipment and personnel have been dynamic. Thus the industry has been subjected to a constant and rapid rate of readjustments in addition to a change in marketing procedure.

In today's highly mechanized commercial feeding operations, all rations being fed represent a scientifically blended formulation of concentrates and roughages. They are offered to the cattle on a free choice basis. The blending of these nutrients is accomplished by the establishment of a precision feed mill which may represent a capital investment of \$50,000 to \$300,000. Current feedlot construction, including land and physical facilities, requires an investment of \$40 to \$65 per head capacity.

During the fattening period, the animals are allotted to a pen where they remain until the desired carcass grade or yield is attained. The physical facilities developed for fattening cattle have been both costly and permanent. They have certain continuing costs regardless of use or turnover. To operate efficiently certain minimum numbers of animals must be fed at all times. Commercial or custom feeding operations of 1,000 head capacity, or greater, produce 98.5 percent of the cattle marketed.

Fat cattle prices reached a high in 1951 at an average of \$36.30 per cwt. for choice 900 to 1,100 pound steers at the Los Angeles market.

By 1953 the average price per cwt. for choice 900 to 1,100 pound steers at the Los Angeles market had fallen to \$23.88, and in 1956 further declined to \$21.02. The fact that too large a volume had reached the market too fast was the primary cause of these low prices. The average price paid for fat cattle between 1951 and 1955 was \$27.85 per cwt. The five-year average between 1956 and 1960 fell to \$24.85. During the spring of 1963, fat cattle sold for \$22.40. From this low, prices began a steady rise until the current 1972 high of \$36.00.

Sample average price, choice steers Los Angeles

<u>Year</u>	<u>Average</u>
1951-55	\$ 27.85
1956-60	24.85
1961-65	24.43
1966-70	27.05
1971-	32.93

The feedlot finishing of cattle is a business of increasing complexities, high costs, large capital investments, and much risk. No aspect of the simpler, less complicated methods of days now gone still stands. *ONLY* minimal success can be derived from the fattening phase of a cattle operation unless good feedlot replacement programs are also in practice.

TABLE IV

FATTENING CATTLE - DRYLOT

<i>Finishing Weight, lbs.</i>	1040	1040	1040
<i>Starting Weight, lbs.</i>	400	500	600
<i>Purchase Price: Per cwt. \$</i>	38.50	36.00	34.50
<i>Per head \$</i>	154.00	180.00	207.00
<i>Average daily gain, lbs.</i>	2.8	2.9	2.7
<i>Days to reach 1000# net</i>	228	189	162
<i>Turnover/year</i>	1.57	1.90	2.22
<i>Feed intake:</i>			
<i>Total lbs.</i>	4050	3440	2995
<i>Average daily lbs.</i>	17.7	18.2	18.5
<i>Percent of average body wt.</i>	2.54	2.60	2.65
<i>Lbs./cwt gain</i>	675	688	749
<i>Feed costs @ \$3.53/cwt.</i>			
<i>(includes \$10/ton mfg. & other costs)</i>	142.96	121.43	105.72
<i>Other costs:</i>			
<i>Death & cull loss, %</i>	2.2	1.6	1.2
<i>Dollar cost/head/100 animals</i>	3.39	2.88	2.48
<i>Interest @ 8%/year: Cattle \$</i>	7.84	7.57	7.45
<i>Feed \$</i>	3.63	2.55	1.90
<i>Medication & Processing, \$</i>	5.55	4.85	4.60
<i>Taxes on Cattle: \$</i>	1.14	.95	.81
<i>Total other costs: \$</i>	21.55	18.80	17.24
<i>Other costs/lb. gain: (cents/lb.)</i>	.0359	.0376	.0431
<i>Break-even Selling Price</i>	\$318.51	\$320.23	\$329.96