

FACTORS INFLUENCING RATE OF GAIN, QUANTITY OF FEED CONSUMED AND CARCASS GRADE

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The two lots in this trial were selected from 75 range-bred heifer calves purchased in November, 1946, for feeding tests at this station. These calves were a uniform group classified as good to choice feeder calves.

Experimental Procedure

The 10 calves in lot 1 were selected as the probable poorer gainers, and the 10 calves in lot 2 as the probable better gainers. The sort was made on the evidences of probable gains as indicated by body capacity, chest room, muscling, bone, and general appearance. Sorting on the basis of these characteristics resulted in a heavier average initial weight of the calves in lot 2. The calves also were graded individually by using a standard feeder chart. Lot 1 graded average good, and lot 2 low choice.

The heifers in each lot received the same kinds of feed, consisting of ground corn, cottonseed meal, and silage. Silage was replaced by alfalfa hay during May and June. Both lots were self-fed grain. As much roughage was fed twice daily as the calves would consume.

December 5, 1946 to July 2, 1947 - 209 days

1. Lot number	1	2
2. Number of heifers in lot	10	10
3. Average daily ration:		
Ground shelled corn	9.14	9.48
Atlas sorgo silage	7.56	10.51
Cottonseed meal	1.31	1.31
Alfalfa hay	.86	1.27
Ground limestone	.09	.09
4. Average initial weight	383	454
5. Average final weight	706	825
6. Average total gain	323	371
7. Average daily gain	1.54	1.77
8. Feed required for 100 pounds gain:		
Ground shelled corn	591	534
Atlas sorgo silage	489	592
Cottonseed meal	85	74
Alfalfa hay	56	71
Ground limestone	6	5
9. Pounds of digestible nutrients required for 100 pounds gain	655	627

Observations

1. Both lots of calves ate practically the same amount of corn (self-fed).
2. Lot 2 consumed more roughage than lot 1.
3. Lot 2 gained 48 pounds more per head than lot 1.
4. Lot 1 required 28 pounds more total digestible nutrients per 100 pounds gain than lot 2.
5. The carcasses of both lots showed practically the same degree of finish.
6. One carcass of each lot graded choice. Seven carcasses of lot 1 graded good, and 2 commercial. Nine carcasses graded good in lot 2.
7. This test indicates that feeder cattle can be selected which in addition to making faster gains, will also utilize a greater proportion of roughages to concentrates per hundred pounds of gain.