

## CALF FEEDING TEST EXPLAINED TO STOCKMEN

By E. B. STANLEY, Animal Husbandman, University of Arizona

### Calves From Arizona Ranges, Which Have Been Fed Arizona-Grown Feeds, Are Sold to Arizona Packing Plant

**S**TOCKMEN and farmers of the Salt River Valley, interested in cattle feeding, were the guests of the Animal Husbandry Section of the University at the Mesa Experimental Farm, April 20, the occasion being the Fourth Annual Cattle Feeders' Day. It has been the custom of the Animal Husbandry Section in recent years to invite farmers and stockmen to the experimental farm at the close of the feeding tests to view the cattle and secure the results of the investigation.

Cattle feeding studies carried on at the Salt River Valley station in age comparison tests have clearly demonstrated that younger animals convert their feed more efficiently into beef than do older stock. This advantage, in addition to the decided trend toward the finishing and marketing of younger cattle, prompted the inauguration this season of a series of feeding tests to study the practicability of fattening calves in Arizona for market. The object of the experiment, which was carried on during the past winter and recently completed, was to secure information concerning the following problems:

1. The feeding qualities of heifer calves versus steer calves when fed together.
2. The feeding qualities of heifer calves versus steer calves, when fed in separate lots.
3. The economy of silage in a ration for fattening calves.
4. Corn silage full-fed with alfalfa hay free-will versus corn silage limited in proportion to amount of hay consumed.
5. The relationship of the initial weight of the calves to their gains.
6. The relationship of the condition of the calves at the beginning of the experiment to the gains during the feeding period.
7. The grain-saving value of cottonseed meal in a ration of alfalfa hay, corn silage and rolled barley.

Sixty high-grade Hereford calves, purchased from the Chiricahua ranches were used in the experiment. They

were allotted into six groups and fed for an experimental period proper of 150 days. One lot consisted of heifers and another was made up of 4 heifers and 6 steers. For 30 days prior to this time the calves were fed on an allowance of alfalfa hay and corn silage in order to get them accustomed to pen feeding and to permit recovery from castration, vaccination and an infection of pink eye.

All of the lots were fed rations composed of alfalfa hay, corn silage, rolled barley and cottonseed meal with the exception of lot VI, which did not receive silage. The first three lots were fed alike with the silage limited in the proportion of 3 to 1 of alfalfa hay, while in lot IV the silage was allowed free will. Lot V was fed the same as the first three lots except that cottonseed meal was not added to the ration until the last 60 days.

The calves were sold at the close of the test to the Arizona Packing Plant at Phoenix, bringing \$8.10 per cwt. both for steers and heifers. A lag in the fat cattle market at the time of marketing was responsible for a small loss on each group with the exception of the lot of heifers, which realized a profit of 67 cents per head. The loss per calf in each group was as follows:

Lot I, 90 cents; lot II, mixed steers and heifers, 57 cents; lot III, 67 cents profit; lot IV, \$1.62; lot V, 1 cent; lot VI, \$3.70.

Complete results of the test are available at the Animal Husbandry Section, University of Arizona.

The results of the experiment are summarized as follows:

1. The heifer calves fed out as well when fed in the pen with steers as they did when fed in separate lots.
2. The heifer calves made a smaller daily gain and required more feed to produce a hundred pounds of gain, although they finished out at least thirty days earlier than the steers. The necessary selling margin was \$2.64 per cwt. for the heifers as compared to \$1.98 for the steers.
3. Though making a slightly small-

er average daily gain, the steers in the silage lot made a more efficient use of feed, a more economical gain, and required a necessary margin of \$1.98 per cwt., as compared to \$2.38 in the lot which did not receive silage. There was a noticeable difference in the finish of the two groups, the silage-fed steers showing more finish, while the alfalfa-fed steers appeared to be more growthy.

4. The calves receiving silage limited in proportion to the alfalfa consumed, slightly excelled the calves fed silage free-will, in average daily gain, in cost of gain, and in the margin necessary to break even.
5. A direct relationship existed between the initial weight of the calves and the rate of gain, the smaller calves making the larger average daily gain.
6. The difference in condition of the calves at the beginning of the experiment was not great enough to be reflected in their average daily gains. The 28 fattest calves showed the same average daily gain as the 32 that were not in as good condition.
7. The addition of cottonseed meal to a ration of corn silage, alfalfa hay and rolled barley did not affect a saving of rolled barley. Lot V, receiving no meal during the first 90 days, made gains at a cost of \$7.97 per cwt., during that period, as compared to \$8.53 in the check lot, which received cottonseed meal. The addition of meal to the ration of the calves in lot V, during the last 60 days, decreased their advantage in the cost of a hundred pounds of gain.

#### COST OF CLOTHING

"The female of the species" spends more for clothing than the male, according to investigators among farm families. The average per person is about \$56.00 per year. The man of the house spends about this, while his wife spends about \$61.00 dollars a year.