

## FEEDING STEERS, OPEN HEIFERS AND SPAYED HEIFERS - 1954-55

Twenty of the lighter calves, 8 steers and 12 heifers, were divided equally and lotted in two lots November 1, 1954. The steers averaged 350 lbs and the heifers averaged 302 lbs. Both lots were fed alike during the 166 day winter period. Corn silage was full-fed. Alfalfa hay was fed at 1  $\frac{21}{31}$  lbs per head for 120 days, then increased to 2  $\frac{21}{31}$  lbs for the remaining of the winter. Whole oats were fed at 2 lbs per head for 120 days, then increased to 3 lbs. Soybean oilmeal, steamed bonemeal, and trace mineralized salt were mixed together, 200 lbs. soybean oilmeal, 20 lbs steamed bonemeal, and 7 lbs trace mineralized salt. Each calf was fed 1 pound of this mixture per day for 30 days, then increased to 1  $\frac{21}{31}$  lbs for the rest of the feeding period. The two lots of mixed calves consumed the same rations for 166 days and gained at the rate of 1.52 lbs per day in one lot and 1.58 lbs per day in the other lot. The steers outgained the heifers, 1.66 lbs per day to 1.48 lbs per day. Winter gains for the 20 head cost \$17.12 per cwt. for feed.

On April 13 all animals were weighed off the winter trial, and after a two day fast, six of the 12 heifers were spayed. The two largest steers were sold and the 18 animals remaining were re-lotted into 3 lots, steers, open heifers and spayed heifers. All lots were fed for 162 days on identical rations of corn silage, soybean oilmeal, alfalfa hay, grain and minerals. The steers consumed 44 lbs of silage per head daily, while each group of heifers consumed 40 lbs of silage per head per day. All lots were fed 2  $\frac{21}{31}$  lbs per head per day of alfalfa hay, and 1  $\frac{21}{31}$  lbs per day of the same soybean oilmeal and mineral mixture as used during the winter feeding period. All animals were fed 3 lbs per head daily of ground oats until the last 60 days, when grain was increased to 5 lbs of a mixture of 2 parts ground barley to 1 part ground oats. Average daily gains during the summer finishing period were 1.78 lbs, 1.66 lbs, and 1.46 lbs for steers, open heifers and spayed heifers respectively. Costs of all gains were higher during the summer than they had been in winter. Each 100 lbs of beef produced during the summer cost \$21.94, \$22.44 and \$25.57 for the steers, open heifers and spayed heifers respectively. In only one month, the final month, did the spayed heifers gain more than the open heifers.

When the finished cattle were sold the steers brought the highest price, \$19.30, the spayed heifers sold for \$18.70, and the open heifers sold for \$17.90. The results of the experiment are summarized in table V.

Table V			
Winter feeding of Hereford calves preliminary to summer fattening.			
	All	Steers	Heifers
No. of animals	20	8	12
Avg. initial wt.	321 lbs.	350 lbs.	302 lbs.
Avg. 166 day wt.	579 lbs.	626 lbs.	548 lbs.
Avg. daily gain	1.55 lbs.	1.66 lbs	1.48 lbs.
Feed per 100 lb. gain			
Corn silage	1780 lb.		
Oats	143 lb.		
Alfalfa hay	94 lb.		
Soybean oilmeal	78 lb.		
Steamed bonemeal	7.8 lb.		
Trace mineral salt	2.7 lb.		
Feed cost per 100 lb. gain	\$17.12		
Summer finishing of steers, open heifers and spayed heifers.			
	Steers	Open Heifers	Spayed Heifers

No. of animals	6	6	6
Avg. initial wt.	596	548	547
Avg. final wt.	884	817	784
Avg. daily gain (162 day finish period)	1.78	1.66	1.46
Feed per 100 lb. gain			
Corn silage	2450	2404	2751
Barley & oats	206	222	251
Alfalfa hay	140	150	170
Soybean oilmeal	73.8	79.3	89.9
Steamed bonemeal	7.4	7.9	9.0
Trace mineral salt	2.6	2.8	3.1
Feed cost per 100 lb. gain	\$21.94	\$22.44	\$25.57
Selling price per 100 lb. wt.	\$19.30	\$17.90	\$18.70
Feed prices used: corn silage \$10.00 ton, barley & oats \$40.00 ton, alfalfa hay \$20.00 ton, soybean oilmeal \$100.00 ton, steamed bonemeal \$110.00, and trace mineralized salt \$55.00 ton.			

### Early Spring Pasture for Yearling Steers - 1955

An experiment in early spring grazing of crested wheat grass pasture and crested wheat grass-alfalfa pasture conducted in 1955 by Dr. Warren C. Whitman. A brief summary of the animal response only will be presented here.

Twenty eight yearling steers were divided into 4 equal groups and each group was placed on an 8 acre pasture May 4, 1955. Two of the pastures had been seeded to crested wheat grass alone, and two had been seeded to crested

wheat grass and alfalfa. Water and bonemeal and salt were available in all lots. The steers were weighed off pasture June 23. Average daily gains were 1.44 lbs and 1.50 lbs in the 2 crested wheat grass pastures, and 1.94 lbs and 2.27 lbs in the 2 crested wheat grass and alfalfa pastures. Gains per acre ranged from 64 lbs in the lowest producing pasture to 99 lbs in the highest producing pasture. When all lots are considered together, each acre of crested and alfalfa produced 42% more beef than an acre of crested alone. Average weights of steers and gains are presented in table VI.

	1 crested alone	2 crested & alfalfa	3 crested alone	4 crested & alfalfa
Initial wt. May 4	493.6 lbs.	494.3 lbs.	495.0 lbs.	494.3 lbs.
Final wt. June 23	568.6 lbs.	591.4 lbs.	567.1 lbs.	607.9 lbs.
Avg. daily gain	1.50 lbs.	1.94 lbs.	1.44 lbs.	2.27 lbs.
Beef produced per acre	65.6 lbs.	85.0 lbs.	64.1 lbs.	99.4 lbs.
This pasture experiment is presented more fully in the section on Grass and Legume Investigations by Warren C. Whitman.				

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