

Value of Chlorotetracycline-Sulfamethazine Supplementation for Beef Calves After Being Weaned and Shipped. (Project 623)

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The number of cattle concentrated in small areas is increasing in Kansas. Conditioning new cattle is a major problem in some operations. This experiment studied effects of adding a combination of chlorotetracycline-sulfamethazine¹ on weight gain, feed efficiency and general health when fed to beef calves after they were weaned and shipped.

Experimental Procedure

Fifty-six Hereford steer calves, purchased through a sale ring in Deming, N.M., were shipped by rail to a point about 50 miles from Manhattan and trucked the remaining distance. Seventy steer calves were purchased at the Wagner ranch in Nebraska and trucked directly to Manhattan. The two groups arrived in a two-day period. They were weighed, ear tagged, tattooed and placed in experimental lots by gate cut immediately after being unloaded. Two pens of 23 head from each location were used; remaining calves from each location were placed together. All were weighed on the 28th and 35th day of the trial.

The starting ration consisted of a low level of supplement and corn silage. Prairie hay was offered free choice. The supplement was increased to 4 pounds per head daily within 7 days while silage was increased to meet consumption. Prairie hay was gradually reduced and discontinued after 12 days. Four pounds of supplement (Table 12) containing 350 mg. of chlorotetracycline-sulfamethazine was fed each steer daily.

The Nebraska calves were fresh and in good condition while the New Mexico calves were severely stressed, showed respiratory difficulty, and a large percentage required treatment. A sharp drop in temperature occurred and rain mixed with sleet fell soon after their arrival causing additional stress.

Results and Discussion

Information presented in Table 13 shows the influence of the treatment. In all but one instance the calves receiving chlorotetracycline-sulfamethazine gained more weight and all calves were more efficient. The steers receiving control rations required more medical attention, however, none of either the control or treated calves died.

¹ Chlorotetracycline-Sulfamethazine and partial financial support furnished by American Cyanamid Company, Princeton, N. J.

Table 12
Supplement Composition

Ingredient, lbs.	Control	Treated
Soybean meal (43.8%)	1000	1000
Ground sorghum grain	749.5	744.5
Dehydrated alfalfa	250	250
Vitamin A Supplement (10,000 IU/gm)	0.5	0.5
Chlorotetracycline- sulfamethazine		5

Table 13
Performance of Steer Calves from Two Locations as Influenced
by Chlortetracycline-sulfamethazine Supplementation.

Calf origin	Nebraska		New Mexico		Nebraska and New Mexico
Supplement ¹	Control	Treated	Control	Treated	Treated
Number of animals	23	23	23	23	24
Initial wt. lbs.	372	372	381	357	360
28 day wt. lbs.	426	434	438	410	417
Gain/animal, lbs.	54	62	57	53	57
Av. daily gain, ² lbs.	1.93	2.21	2.04	1.89	2.04
Feed/lb. gain, ² lbs.	6.79	6.01	5.96	5.76	6.0
35 day wt. lbs.	440	445	447	434	450
Gain/animal, lbs.	68	73	66	77	90
Av. daily gain, ² lbs.	1.94	2.09	1.89	2.20	2.57
Feed/lb. gain, ² lbs.	8.07	7.66	7.41	6.30	6.16
Number times treated, 35 days ³	7	1	41	30	17

1. 350 mgs. of chlortetracycline-sulfamethazine was fed per head daily in the treated supplement.
2. Calculated on as-fed basis.
3. Injected with 10 cc combiotic.