

Beef Cattle

Response of Previously Implanted¹ Cattle to Oral Diethylstilbestrol² (Project 430).

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Steer calves used in a trace mineral study reported elsewhere in this publication were also used in a study designed to further determine the effect of previous implantation with diethylstilbestrol on feedlot performance.

Experimental Procedure

May 4, 1959, steers on the trace mineral study in Woodson county were randomly divided. A 12-mg. implant of diethylstilbestrol was placed in the left ear of each of six calves in either treatment group. All calves grazed on native pasture until August 1, 1959. They were then weighed off pasture and trucked to Manhattan. After a one-week adjustment period they were started on full feed. The fattening period lasted 90 days; during that time all steers received 10 mgs. of oral diethylstilbestrol per head per day.

The ration fed included ground corn, prairie hay, and 1 pound of soybean oil meal per head per day. Corn was increased gradually for the first three weeks until the cattle were on full feed. Thereafter corn and prairie hay were available at all times on a free-choice basis.

Salt and a mixture of salt and bonemeal were available at all times, as was water from automatic waterers.

Observations

Gain and carcass data are summarized in Table 7. Since control and implanted steers were fed together, feed efficiency could not be calculated.

During the 89-day grazing period, the implanted calves gained 19 pounds more each than control calves in the same pastures. That is an advantage of 0.22 pound per day for the implanted calves during the grazing period.

During the fattening phase the control calves and the previously implanted calves were fed together. Average daily gains for the two groups were very similar. A summary of the carcass data also failed to show any differences that might have occurred from implants prior to the grazing period.

1. Stimplants furnished by Chas. Pfizer & Co., Inc., Terre Haute, Ind.
2. Stilbosol furnished by Eli Lilly & Co., Indianapolis, Ind.

Table 7

Response of previously implanted steers to oral diethylstilbestrol in the fattening ration.

Phase 1—Grazing—May 4, 1959, to August 1, 1959—89 days.

Treatment	Control	12-mg. DES implant
Number steers	12	12
Av. initial wt., lbs.	703	687
Av. final wt., lbs.	891	894
Av. total gain, lbs.	188	207
Av. daily gain, lbs.	2.11	2.33

Phase 2—Fattening—August 8, 1959, to November 6, 1959—90 days.

Number steers	12	11 ¹
Av. initial wt., lbs.	845	840
Av. final wt., lbs.	1168	1172
Av. total gain, lbs.	323	332
Av. daily gain, lbs.	3.59	3.69

1. One calf died September 5, 1959.

Table 7 (Continued)

Standard error	±0.12	±0.28
Carcass grades, USDA:		
Low choice	1	3
High good	3	1
Av. good	3	1
Low good	4	5
High standard	1	1
Av. USDA grade ²	10.9	11.0
Av. marbling score ³	7.6	7.4
Av. firmness score ⁴	4.0	4.3
Av. fat thickness, in. ⁵	0.62	0.58
Av. ribeye, sq. in. ⁵	12.59	12.24

2. Average grade determined as follows: Low choice, 13; high good, 12; average good, 11; low good, 10; high standard, 9.

3. Visual marbling score: moderate, 5; modest, 6; small amount, 7; slight amount, 8.

4. Firmness of ribeye: firm, 2; moderately firm, 3; modestly firm, 4; slightly firm, 5.

5. Measured at 12th rib.

Trifluomeprazine Fed to Fattening Steers. Project 626*

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Trifluomeprazine (TFL) fed to fattening steer calves at the rate of 5.0 mgs. per day apparently increased gains significantly in an earlier trial. However, the tranquilizer gave no increase in gain when fed at the rate of 2.5 mgs. per day. This study was designed to again check the response at the 5.0-mg. level and also to determine if a higher level (10.0 mgs. per day) would give a response.

Experimental Procedure

The steers used in this study were good to choice grade Herefords, averaging 980 pounds, that originated in New Mexico. They had been wintered in central Kansas at a rather high level of feeding. The steers were randomly allotted, according to weight, into four groups of 10 animals each. Treatment groups were as follows:

1. Control ration.
2. Control plus 10.0 mgs. of oral diethylstilbestrol (DES) per head per day.
3. Control plus 5.0 mgs. of trifluomeprazine (TFL) per head per day.
4. Control plus 10.0 mgs. of trifluomeprazine per head per day.

The steers were brought to a full feed of cracked corn plus alfalfa hay and soybean oil meal during the first three weeks of the feeding period. Sorghum silage was mixed with the grain during this preliminary period. Silage was decreased daily and grain was increased until the cattle were on a full feed of grain. After they were on full feed, cracked corn was available at all times on a free-choice basis. One pound of soybean oil meal per head per day was scattered over the grain each day. Additives were carried in the soybean oil meal. Alfalfa hay was limited to 3 or 4 pounds each per day throughout the feeding period.

The cattle were kept in concrete-floored lots with open sheds on the north. Water was available from automatic waterers at all times. Salt and a mixture of salt and bonemeal were also available at all times.

Observations

Feedlot and slaughter data are summarized in Table 8. Feeding 10 mgs. of oral stilbestrol per day resulted in a significant increase in average

* Partially supported by a grant from Smith, Kline, and French Lab., Philadelphia, Pa.

1. Stilbosol furnished by Eli Lilly & Co., Indianapolis, Ind.

2. Trifluomeprazine furnished by Smith, Kline, & French Lab., Philadelphia, Pa.