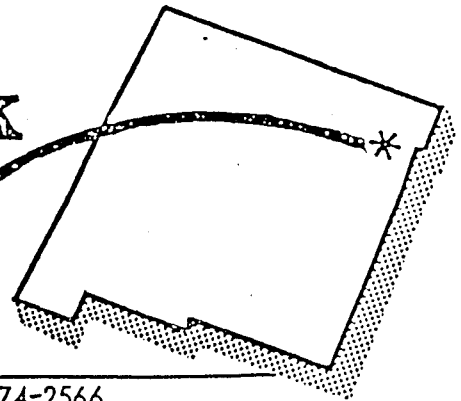




Clayton Livestock Research Center

PROGRESS REPORT



Route 1 Box 109 Clayton, New Mexico 88415 Tel. (505) 374-2566

Progress Report No. 3 (August, 1978)

THE INFLUENCE OF A THREE-DAY MASS ADMINISTRATION OF OXYTETRACYCLINE TO NEWLY ARRIVED CALVES

Progress reports 1 and 2 (May and July 1978) dealt with energy levels and free choice alfalfa hay in receiving programs for newly arrived, stressed calves. The purpose of this report is to present the results of giving an intramuscular injection of oxytetracycline for three successive days beginning with the day of arrival. The level administered was 5 mg per pound body weight (0 ml per 100 lb body weight). Two hundred seven calves were thus treated and 257 calves from the same shipments were used as controls with the sick calves being pulled and treated as necessary.

The overall results (table 1) show that the 3-day treatment immediately upon arrival reduced the death loss and increased the rate of gain although the average number of days treated was slightly greater and more calves were treated. Thus, the medication cost per head was greater but when placed on a cost of gain basis, the 3-day program resulted in a slightly lower medication cost. When feed cost was included, the 3-day treatment resulted in a 9¢ saving per pound of gain.

The data presented in table 2 show that the 3-day preventive medication program was beneficial either with or without alfalfa hay.

Table 1. Influence of a three-day oxytetracycline treatment during the first 27 days following arrival

Item	Control	Three-day treatment
Number of calves	257	257
Mean purchase weight, lb	372	366
Days to regain pay weight	36	26
Death loss, %	5.0 ^b	2.7 ^a
Calves treated, %	67 ^a	100 ^b
Average days treated	5.0 ^a	5.4 ^b
Returns, %	20	17
Medication cost per head (all calves), \$	3.15	4.44
Daily feed intake, lb	9.40	9.51 ^b
Daily gain from arrival, lb	1.23 ^a	1.59 ^b
Feed per pound gain, lb	7.64	5.98
<u>Cost per pound gain, ¢</u>		
Feed	41.11	31.86
Processing and medication	13.36	13.23
<u>Totals</u>	<u>54.47</u>	<u>45.09</u>

^{a, b} Means in appropriate comparisons having different superscripts are significantly different statistically.

The combination of free choice alfalfa hay with a milled ration and the 3-day treatment produced the best results.

Cattle making slow gains often tend to compensate by more rapid gains during a later period when conditions are more favorable. Thus, it is of interest to determine if the control calves made up the 10-pound differ-

ence in weight gain occurring during the first 27 days. After a second 27-day period the gain of the control calves was still 8 pounds less than the treated calves. Following an additional 124 days on a growing program, the difference in gain per head was still 10 pounds in favor of those receiving the 3-day treatment of oxytetracycline on arrival.

-- G. P. Lofgreen

Table 2. Effect of three-day oxytetracycline with and without free choice alfalfa hay

Item	Control		Free choice alfalfa	
	Control	3-day Oxytet.	Control	3-day Oxytet.
Number of calves	130	128	127	129
Mean purchase weight, lb	372	365	372	368
Days to regain pay weight	47	32	24	20
Death loss, %	6.2	3.9	3.9	1.6
Calves treated, %	70	100	64	100
Average days treated	5.1	5.6	4.8	5.3
Returns, %	24	15	16	18
Medication cost per head (all calves), \$	3.05	4.60	3.19	4.36
Daily feed intake, lb	8.80	9.04	10.00	9.96
Daily gain from arrival, lb	.77	1.25	1.70	1.94
Feed per pound gain, lb	11.43	7.23	5.88	5.13
<u>Cost per pound gain, ¢</u>				
Feed	67.21	42.51	28.90	24.65
Processing and medication	<u>20.87</u>	<u>17.29</u>	<u>9.75</u>	<u>10.70</u>
Totals	88.08	59.80	38.95	35.35

Remember the open house and dedication of the Clayton Livestock Research Center facilities on October 10, 1978.

A. B. Nelson

A. B. Nelson, Head
Department of Animal and Range Sciences

Agricultural Experiment Station
NEW MEXICO STATE UNIVERSITY
Las Cruces, New Mexico 88003

L. S. Pope, Director

REE-ANNUAL REPORT OR BULLETIN
OR REPORT OF PROGRESS

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE
AGR 101
THIRD-CLASS

