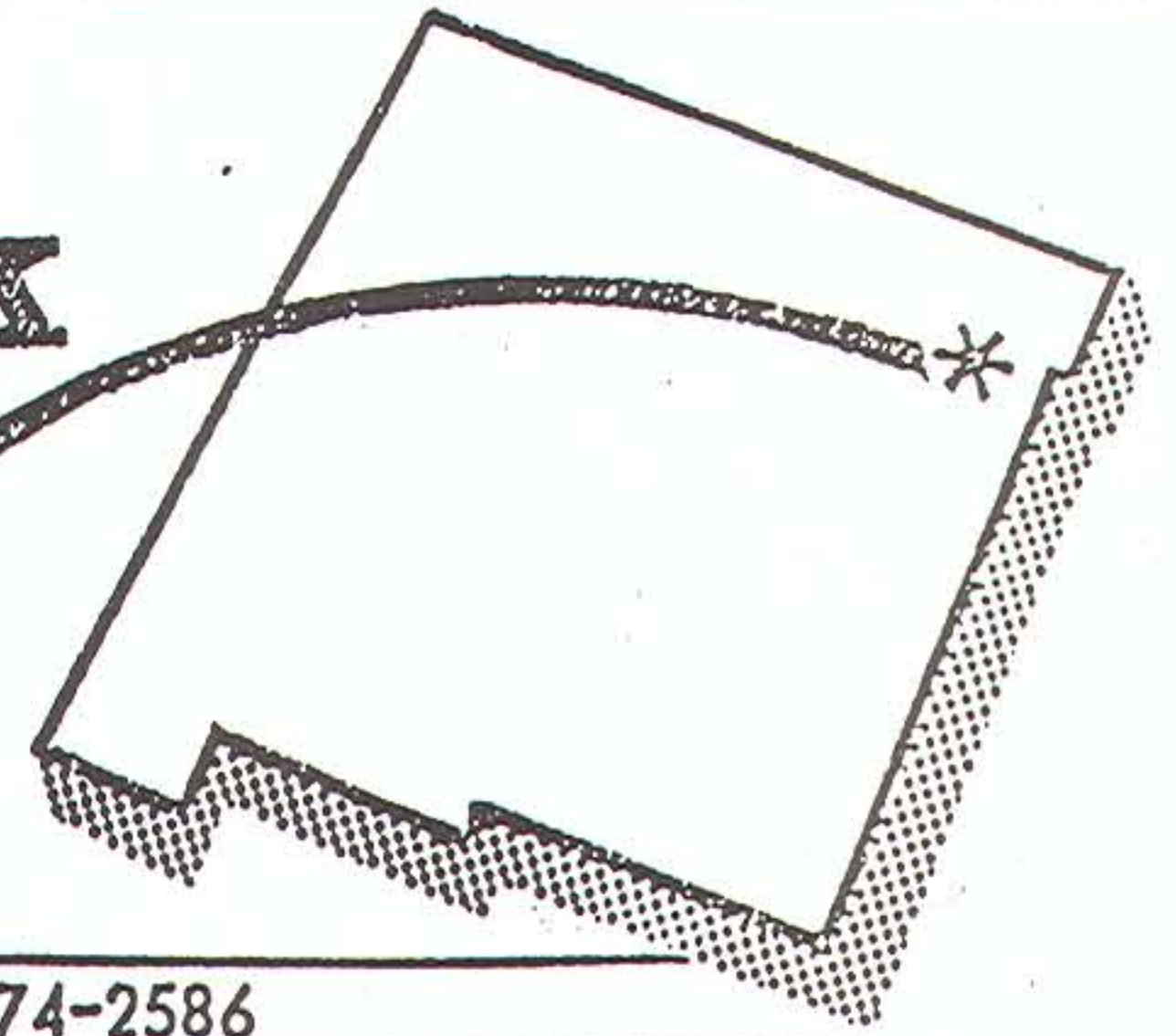




Clayton Livestock Research Center

PROGRESS REPORT



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CONTINUED STUDIES ON PREVENTIVE MEDICATION FOR NEWLY RECEIVED CALVES

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In an earlier study (Progress Report No. 15) it was found that 1.75 g of oxytetracycline (Terramycin®) given at time of processing and for the following two days reduced sickness in newly received calves approximately 30%. Administration of 25g of sustained release sulfadimethoxine (Albon SR®) brought about a 43% reduction. Also it was found that the effects of the drugs were additive when Terramycin was given at processing and for two more days then followed by Albon SR given at the time of the third injection of Terramycin. Calves given this combination as a preventive medication program had 82% less sickness than control calves given no preventive medication but treated as they became sick. One of the disadvantages of such a program is the need to return all calves to the chute for two successive days following processing. There is now on the market a long-acting oxytetracycline (LA200®) which eliminates returning the calves to the chute following processing for administration of successive doses of oxytetracycline.

A trial has been conducted at this Center using LA200 at time of processing with Albon SR being given to one group at processing and another group returned to the chute and given Albon SR after three days. Another group of calves served as controls with sick calves being pulled and treated as necessary while a fourth group received 1400 mg of chlortetracycline and 1400 mg of sulfamethoxazole (AS700®) per head daily in the feed for two weeks with the drugs being gradually withdrawn during the third week. All calves

were fed comparable receiving diets based on a 75% concentrate milled ration plus free choice hay during the first week with the 75% concentrate ration fed throughout the four week receiving period. One load (127 head) of Florida calves and 199 native weaner calves were used in the study with both groups being received in mid-October.

Results are shown in the accompanying table. Administration of LA200 at processing followed by Albon SR after three days resulted in a 92% reduction in total sick days while both drugs administered at processing resulted in an 88% reduction. The difference between administering the Albon SR at processing or after three days was not statistically significant. Because of the lower sickness level and the reduced handling of these two groups of calves, feed consumption and weight gains were greater than for the controls resulting in a more rapid recovery of purchase weight. AS700 in the feed did not reduce total sick days compared to the controls although conversion of feed to gain was better than the controls. Feed consumption by AS700 group for the first two weeks averaged only 79% of the control group while during weeks three and four, when the drug was being reduced, feed consumption averaged 105% of the controls. This indicates the drug level may have been too high during the first two weeks.

The savings in treatment costs for the two groups receiving LA200 and Albon SR were approximately the same as the cost of the two

Results during the 28-day receiving period

Item	Preventive medication			in fee
	none	LA200 followed by Albon SR after 3 days	LA200 plus Albon SR at processing	
No. of calves	79	81	84	82
Percent treated for BRD ¹	63 ^b	6 ^a	7 ^a	70 ^b
Total sick days	236 ^b	18 ^a	28 ^a	310 ^b
Days treated per sick calf	4.7 ^b	3.6 ^a	4.7 ^a	5.4 ^b
No. of returns	6	1	0	5
No. of deads	1	0	0	1
Daily feed intake, lb	8.38 ^{ab}	9.21 ^c	8.93 ^{bc}	7.95 ^a
Daily gain from arrival, lb	1.78 ^a	2.37 ^b	2.24	2.02 ^{at}
Feed per pound of gain, lb	4.71	3.89	3.99	3.94
Days to regain shrink and death loss	18	10	13	19
Daily gain from purchase, lb	.49	1.26	1.14	.76
Feed per pound gain from purchase, lb	17.10	7.31	7.83	10.46
<u>Medication costs, \$/head on all calves:</u>				
Preventive medication	.0	4.21	4.21	1.03
Treatment of sick calves	2.84	.21	.32	3.58
Chute charge ²	1.50	.36	.17	1.88
Totals	4.34	4.78	4.70	6.49
Cost per pound of gain above purchase weight, ¢	31.63	13.55	14.72	30.50

¹ Bovine respiratory disease

² Chute charges @ 50¢/head to pull and treat a sick calf and 25¢/head to mass medicate an entire pen. (No charge if mass medicated at processing.)

drugs so that the total medication cost per head was not greatly different for these two groups and the controls. However, since gains were improved in these groups the cost

per pound of gain was lower for the medicated groups. Because AS700 in the ration did not reduce sickness no savings in medication costs were achieved by its addition.

Livestock Research and Cattle Growers Short Course is scheduled for February 16-17, 1981 at New Mexico State University, Las Cruces.

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