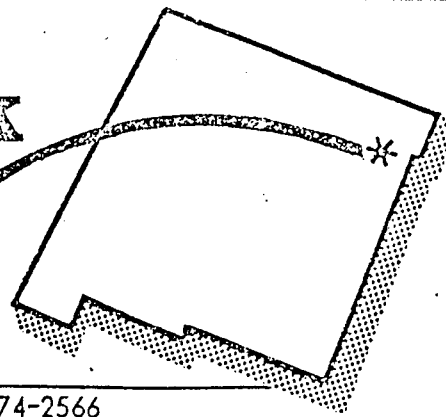




Clayton Livestock Research Center

PROGRESS REPORT



Route 1 Box 109

Clayton, New Mexico 88415

Tel. (505) 374-2566

Progress Report No. 14 (March 1980)

TIME OF BRUCELLOSIS VACCINATION OF HEIFERS

Glen P. Lofgreen and Jeffrey K. Elliott¹

Two hundred sixty three heifers were shipped from Florida to Clayton, NM during December, 1979 and January, 1980. Purchase weight averaged 360 pounds and the time in transit was 35 hours for one load and 42 hours for the other. Immediately prior to shipment 1/3 of the calves were given the brucellosis vaccine. Upon arrival in Clayton another 3 were vaccinated and the remaining 1/3 were vaccinated 28 days later. Records were kept of the number of calves treated, days

treated, feed consumption and weight gains. All calves were fed a 75% concentrate milled ration plus free choice oat hay for one week. The oat hay was discontinued following the first week and the calves continued on the 75% concentrate alone for the remainder of the receiving period (28 days). Following the vaccination of the delayed group at 28 days observations were continued for another 4 weeks to determine if the 28 day vaccination would cause any measurable ad-

Item	Time of vaccination		
	Prior to shipment	Upon arrival	Delayed 28 days
Number of heifers	91	86	86
Number treated for respiratory symptoms	36 ^b	32 ^b	22 ^a
Days treated	5.1	4.7	5.2
Total treatment days	184	150	114
Number of deads	4	3	0
<u>Daily feed intake, lb</u>			
First 7 days	6.11 ^b	4.60 ^a	6.30 ^b
Next 21 days	10.35	10.20	10.53
Entire 28 days	<u>9.29^b</u>	<u>8.80^a</u>	<u>9.47^b</u>
<u>Daily weight gain, lb</u>			
First 7 days	3.24 ^b	2.51 ^a	3.61 ^b
Next 21 days	2.28	2.35	2.24
Entire 28 days	<u>2.52</u>	<u>2.39</u>	<u>2.58</u>
Days to regain shrink and death loss	19	19	11
Daily gain from purchase weight, lb	.73	.76	1.36
Feed per pound gain from purchase, lb	12.73	11.58	6.96

^{a, b} Significantly different at P < .05.

¹ The assistance of Donald Reif, DVM, Clayton, NM, is gratefully acknowledged.

verse effects upon sickness level, feed intake or weight gains. The 28 day results are shown in the accompanying table. Calves vaccinated prior to shipment or upon arrival required 61% and 32% more treatment days than those vaccinated after 28 days. None of the calves vaccinated at 28 days required treatment following vaccination. The calves vaccinated upon arrival ate 27% less feed the first week and gained 30% less weight than those vaccinated 28 days later. After the first week feed consumption and weight gains of the three treatment groups were not

different. Even after 28 days, however, the differences in feed consumption and weight gains were still evident. Those vaccinated prior to shipment did not show the reduced feed intake and weight gain observed in the group vaccinated on arrival. Calves vaccinated 28 days following arrival regained purchase weight more rapidly and efficiently and had a lower respiratory sickness level than calves vaccinated either prior to shipping or upon arrival. Data from this trial indicate that it might be wise to delay the vaccination of heifers for brucellosis until they have recovered from shipping stress.

Visitors are welcome at the Clayton Livestock Research Center. Also, we are happy to add names to our mailing list to receive these progress reports.



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