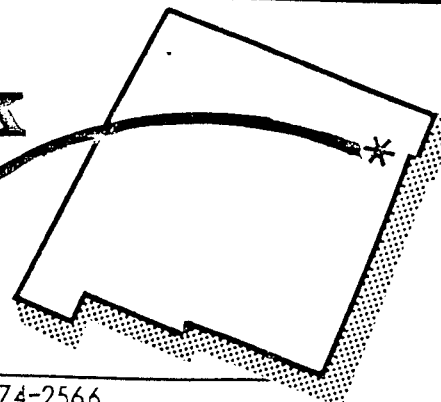




Clayton Livestock Research Center

PROGRESS REPORT



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PROGRESS REPORT NO. 48 (August 1987)

EFFECTS OF A PRECONDITIONING PROGRAM ON HEALTH AND PERFORMANCE OF NEWLY-WEANED CALVES RECEIVED ON WHEAT PASTURE

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To investigate the effects of preconditioning and receiving programs on health and performance of newly weaned calves, a study was conducted by the Clayton Livestock Research Center in cooperation with the USDA Agricultural Research Service. Experimental procedures and results from the preconditioning and feedlot phases of this project have previously been reported (Progress Report No. 46). The object of this report is to present the results of preconditioning on health and performance of calves received on wheat pasture.

Morbidity data during the receiving period are shown in Table 1. Generally, fewer preconditioned (PC) calves were pulled and treated for sickness compared to non-preconditioned (NPC) calves. The number of days required for treatment/morbid calf was, however, equal between groups, indicating severity of sickness was similar. The reduction in morbidity observed for PC calves was achieved without the mass medication program administered to NPC calves upon arrival, thus reducing overall medication costs without apparently compromising the animals' health. Preconditioned calves, during the receiving period, gained more weight than NPC calves (Table 2). During the post-receiving grazing period, however, NPC calves had a greater

daily and total weight gain than PC calves (Table 2). When all cattle were returned to the feedlot for finishing, there were no differences in weight gain, feed intake, or feed efficiency between PC and NPC calves (Table 2). The results of this study suggested a preconditioning program similar to that used in this trial would not be cost effective for the rancher to implement since a premium price for PC calves would not appear justified by improved performance or substantial reduction in morbidity. Similarly, for a stocker-cattle operator receiving PC calves on wheat pasture, this preconditioning program would not appear cost effective due to decreased performance in comparison to NPC calves.

Table 1. Effect of Preconditioning on Morbidity of Calves Received on Wheat Pasture

Item	NPC	PC
Animals, No.	41	40
Percent treated	12	8
Treatment days/morbid calf	3.4	3.3
Medication costs, \$		
Treatment, total	31.43	14.28
Mass medication	242.31	0
Total medication	273.74	14.28
Total medication/calf	6.68	.36

¹ The authors express appreciation to Drs. Carlton Herbel, Ron Parker and Arnold Nelson for assistance during the preconditioning phase of the trial.

Table 2. Effect of Preconditioning on Weight Gain for Calves Received on Wheat Pasture^a

Item	Treatment		SE ^b
	NPC	PC	
	Receiving Period		
Animals, No.	39	38	
Arrival wt. lbs.	428	420	
Wt. gain during period, lbs.	9.5 ^c	22.0 ^d	4.2
Daily wt. gain during period, lbs/day	.33 ^c	.75 ^d	.13
	Growing-Finishing Period		
Wt. at end of receiving period, lb.	485	487	
Daily wt. gain on wheat pasture, lbs/day	2.11 ^c	1.96 ^d	.04
Total wt. gain on wheat pasture, lbs.	365 ^c	338 ^d	7.3
Daily wt. gain in feedlot, lbs/day	3.23	3.34	.13
Total wt. gain in feedlot, lbs	223	230	9.2
Daily feed intake in feedlot, lbs/day	21.2	21.11	.30
Feed required/lb gain in feedlot, lb.	6.99	6.36	.42

^a NPC = non-preconditioned calves; PC = preconditioned calves.

^b Standard error of mean.

^{c,d} Means with different superscripts are statistically different.



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 Las Cruces, New Mexico 88003-0058
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