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Clayton Livestock Research Center

PROGRESS REPORT

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EFFECTS OF DIFFERENT IMPLANTS ON PERFORMANCE OF STEERS DURING SUMMER GRAZING AND IN THE FEEDLOT

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Implanting various growth-promotants has proven to be an effective and economical method for enhancing the performance of cattle, both in the feedlot and on pasture. Several implants are presently available to the producer; however, data are needed regarding implants or combinations of implants that will result in the greatest improvement throughout the entire production cycle. Therefore, a trial was conducted to evaluate the effect of three commercially available implants on performance of stocker cattle grazing summer range and their influence on subsequent performance in the feedlot.

On May 13, 1983, 160 mixed crossbred steers were branded, weighed individually ear-tagged and implanted with either Ralgro® (R), Synovex-S® (S), Compudose® (C) or no implant (0). Steers were allowed to graze a single native blue grama-buffalo grass pasture until October 13, 1983. At this time, steers were weighed and placed in the Clayton Livestock Research Center Feedlot. After 5 days, cattle were once again weighed and reimplanted. Within each of the original implant groups, one-fourth served as controls and were not reimplanted in the feedlot, one-fourth were reimplanted with R, one-fourth with S and one-fourth with C, thereby producing all 16 possible implant combinations with approximately 10 steers/treatment. All steers were fed a 90% concentrate finishing ration for the remainder of the trial.

During the summer grazing period (Table 1), all implants improved average daily gain (ADG) compared with controls, although there were no differences in ADG among implants. Overall, implanting cattle before summer grazing, improved ADG 11% compared with non-implanted cattle. In the feedlot (Table 2) steers receiving no implant during either the pasture or feedlot phase and steers implanted with C on pasture and R in the feedlot had the lowest ADG. Steers receiving S in both periods had the highest ADG in the feedlot. The ADG of steers implanted with S or C during the feedlot phase was greater than non-implanted or R-implanted steers when averaged across all implant treatments of the grazing period. Because steers were not reimplanted later in the finishing period with either R or S, as is commonly recommended, it was anticipated that response to C might be greater because of its longer active lifetime. Values in parentheses in Table 2 refer to total weight gain for each implant treatment during the 303 days of the trial. Total gains were generally greater among steers implanted during both phases of the study and those steers receiving at least one S implant. The results of this study did not indicate

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directly which implant or implant combination might result in the best overall performance. However, regardless of which implant was used, implanting cattle during the summer grazing period did not adversely influence subsequent performance in the feedlot and did not reduce the response to implants in the feedlot. This study gives additional support to the practice of implanting cattle and suggests there is no justification for feeder-buyers to discount cattle implanted on pasture. Likewise, producers who retain ownership of cattle will benefit most by implanting before placing cattle on pasture and again when entering the feedlot.

Table 1. Effect of implants on performance of steers grazing summer range.

Item	Implant				All Implants
	Control	R	S	C	
No. of steers	39	39	38	38	114
Initial wt lb	476.6	480.4	459.6	470.6	
Final wt, lb	643.3	660.1	642.5	657.6	
Total gain, lb	164.4	180.5	182.7	186.3	183.2
Daily gain, lb	1.10	1.20	1.22	1.24	1.22
ADG above control, %	-	+9.1	+10.9	+12.7	+11.0

Table 2. Effect of implants on daily gain (pounds) in feedlot and total gain during the trial.

Implant received in feedlot	Implant received on pasture				
	0	R	S	C	Avg
0	2.39 (500)	2.46 (517)	2.65 (553)	2.62 (541)	2.53 (528)
R	2.63 (540)	2.48 (542)	2.78 (579)	2.34 (505)	2.56 (542)
S	2.56 (558)	2.75 (562)	2.90 (594)	2.85 (609)	2.76 (581)
C	2.87 (550)	2.82 (576)	2.78 (559)	2.57 (521)	2.76 (552)
Avg	2.61 (537)	2.63 (549)	2.78 (571)	2.60 (544)	

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