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Effect of reimplanting with Ralgro on performance and carcass characteristics of feedlot heifers

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Effect of Reimplanting with Ralgro on Performance and Carcass Characteristics of Feedlot Heifers¹

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Summary

A field study was conducted to evaluate the effect of reimplanting, and of implanting technique, on the performance of yearling heifers. Daily gains of reimplanted, single implanted and non-implanted cattle averaged 3.00, 2.93 and 2.81 lb, respectively. Implanting Ralgro at the base of the ear produced a slight and not statistically significant increase in gain over the "old" site 1 to 2 in. from the base of the ear. Feed efficiency of the single implant heifers was 5.5% better than controls, with an additional 1.9% improvement due to reimplanting. Carcass characteristics were not materially influenced by implant treatment.

Introduction

Many cattle feeders question the value of re-implanting, particularly for 100 to 120 day feeding periods. To answer that question, we studied the effect of reimplanting heifers with Ralgro under commercial feedlot conditions. We also compared "old" and "new" implant sites.

Experimental Procedure

Three hundred six yearling heifers weighing approximately 670 lbs were randomly assigned to three treatments: 1) control (no implant), 2) one 36 mg Ralgro implant at processing, or 3) one 36 mg Ralgro implant at processing and another 36 mg Ralgro implant approximately mid-way through the 112 day trial. In addition, half of the heifers in treatments 2 and 3 received the implant in the "old" site (1 to 2 in. from the base of the ear), while the other half were implanted at the "new" site (at the base of the ear). At reimplanting time, only the heifers in treatment 3 were removed from their feeding pen.

Individual, non-shrunk weights were taken at the beginning and end of the trial. Cattle in each treatment were fed and managed alike in three adjoining pens. Since about 21% of the heifers were pregnant at arrival, the data were corrected for pregnancy effects on performance.

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Results

All implanted cattle gained faster than controls (Table 35.1), but differences were significant ($P < .05$) only for those implanted once at the "old" site and those reimplanted at the "new" site. When averaged across implant sites, single implant heifers gained 13.4 lbs more and reimplanted heifers gained 21.8 lbs more than non-implanted heifers. Implanting once at processing improved feed efficiency 5.5% over controls; reimplanting resulted in an added 1.9% improvement. The relatively moist rations made the feed to gain values appear high.

The effect of implant site on performance was inconsistent. Implanting at the "new" site produced more gain than the old site in the reimplanted cattle, but the "old" site was superior in the single implant group. Although the "new" implant site gave only slightly better performance overall, we prefer it because of added ease and speed.

Hot carcass weight, dressing percentage, backfat thickness and quality grade were not significantly affected by implant treatment. Ribeye areas of the reimplanted (new site) cattle were larger ($P < .05$) than controls, perhaps due to their larger carcasses.

Table 35.1. Effect of Implanting on Gain, Feed Efficiency and Carcass Characteristics of Feedlot Heifers.

Implant Site ^f	Treatment				
	Control No implant	Single Ralgro		Reimplant Ralgro	
		Old	New	Old	New
No. heifers	103	50	49	51	53
Final wt., lb	987.5	1007.5	994.1	1000.0	1019.0
Total gain, lb	314.7	334.9	321.4	327.0	346.1
Daily gain, lb	2.81 ^{de}	2.99 ^{bc}	2.87 ^{cde}	2.92 ^{bcd}	3.09 ^{ab}
Carcass wt., lb	596.2	611.5	606.6	612.3	611.1
Dressing percent	60.4	60.7	61.0	61.3	60.0
Ribeye area, sq. in.	12.0 ^a	12.5 ^{ab}	12.2 ^{ab}	12.4 ^{ab}	12.7 ^b
Backfat, in.	.46	.48	.49	.47	.48
Quality grade ^b	7.5	7.4	7.6	7.7	7.7
Feed/gain, as fed ^h	10.94	10.34		10.13	

a,b,c,d,e Means with different superscripts differ significantly ($P < .05$).

^f "Old" implant site 1 to 2 in. out from base of ear; "new" site at base of ear.

^g 5 = Good, 6 = High Good, 7 = Low Choice, 8 = Choice.

^h Cattle implanted in old and new sites were fed in same pen, so separate feed conversions could not be obtained.