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Comparison of 36 mg and 72 mg Ralgro® for suckling steer calves (1986)

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Comparison of 36 mg and 72 mg[1] Ralgro® For Suckling Steer Calves[2]

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Summary

In order to evaluate whether a 72 mg Ralgro® dosage would improve growth response over 36 mg, 260 suckling steer calves on two Kansas ranches were assigned to five implant treatments. In trial 1, 72 mg Ralgro® increased gain more than 36 mg Ralgro®. In trial 2, all implant treatments gave only a slight increase in growth rate over controls. Thus, the results are inconclusive and warrant more research before an accurate evaluation of 72 mg Ralgro® for suckling steer calves can be made.

Experimental Procedures

Two hundred and sixty suckling, Simmental-cross steer calves on two Kansas ranches were assigned randomly at branding (2 to 3 mo. old) to these treatments: 1) Control - no implant, 2) 36 mg Ralgro® at branding, 3) 72 mg Ralgro® at branding, 4) 36 mg Ralgro® at branding and 36 mg Ralgro® at 5 to 6 months of age, or 5) 36 mg Ralgro® at branding and 72 mg Ralgro® at 5 to 6 months of age. Individual nonshrunk weights were taken at branding in May, at reimplanting in August, and at weaning in October. Least Squares Means Procedures were used to analyze the data.

Results

Results of these trials are shown in Table 9.1.

May to August. No significant treatment differences existed in trial 1 or trial 2, or when the data were combined during this early period.

August to October. Treatments with 72 mg Ralgro® increased or tended to increase daily gains more than treatments with 36 mg Ralgro® in Trial 1 and in the combined data. In fact, a single 72 mg implant at branding increased growth rate as much as 36 mg at branding plus 36 mg at reimplanting time. The fastest growth rate in trial 1 and in the combined data was obtained with the 36 mg + 72 mg Ralgro® treatment. However, in trial 2, calf gains on the implant treatments did not differ from controls.

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[1] Note: 72 mg Ralgro® is not an approved dosage for Ralgro®. It was used in these trials under authorization of the FDA in conjunction with International Minerals and Chemical Co.

[2] Appreciation is expressed to Norman Rohleder, Russell and Roger Wilson, Oberlin for providing cattle and assisting with data collection, and to County Extension Agricultural Agents Allen Dinkel, Decatur and Del Jepsen, Russell.

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May - October. In trial 1, only the 36 mg + 72 mg Ralgro® treatment was superior to the control. In trial 2, and when the data were combined, all implant treatments gave only a slight increase in growth rate over control. Thus, the results of these two trials are inconclusive, indicating that more research with these implant treatments must be conducted before an accurate evaluation of 72 mg Ralgro® for suckling steer calves can be made.

Table 9.1. Results of Two Trials Comparing Various Dosages of Ralgro® for Suckling Steer Calves

	Implant Treatment				
Item	Control	36 mg Ralgro®	72 mg Ralgro®	36 mg Ralgro® + 36 mg Ralgro®	36 mg Ralgro® + 72 mg Ralgro®
No. Calves:					
Trial 1	25	26	23	25	26
Trial 2	27	28	28	27	25
Combined	52	54	51	52	51
Daily Gain, May to August, lb:					
Trial 1	2.34	2.32	2.34	2.43	2.34
Trial 2	2.40	2.47	2.45	2.40	2.36
Combined	2.39	2.41	2.41	2.43	2.37
Daily Gain, August to October, lb:					
Trial 1	1.36[a]	1.47[a]	1.61[ab]	1.43[a]	1.73[b]
Trial 2	1.13[a]	1.10[a]	1.12[a]	1.17[a]	1.22[a]
Combined	1.16[a]	1.19[a]	1.27[ab]	1.21[a]	1.38[b]
Daily Gain, May to October, lb:					
Trial 1	1.97[a]	2.00[ab]	2.06[ab]	2.05[ab]	2.11[b]
Trial 2	1.88	1.92	1.91	1.90	1.90
Combined	1.90	1.93	1.95	1.94	1.97
Increase over Control, May to October:					
Combined Trials					
Percent		1.6	2.6	2.1	3.7
Total Gain, lb		5.04	8.40	6.72	11.76

[ab]Values in the same row with different superscripts differ significantly (P<.10).