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

D.D. Simms

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

D.D. Simms[3]

Summary

In a study in which 525 Simmental-cross steer calves were assigned to five implant treatments in four trials, 72 mg Ralgro® implants failed to increase performance significantly over conventional 36 mg implants.

Introduction

Some researchers and producers have questioned the adequacy of the standard 36 mg dosage of Ralgro® for high growth-potential, suckling steer calves. Consequently, these trials were conducted to evaluate a 72 mg dosage® either at branding or at reimplanting time.

Experimental Procedures

Simmental-cross suckling steer calves were randomly assigned to the following treatments: 1) Control (no implant), 2) 36 mg Ralgro® at branding (1-3 mo), 3) 72 mg Ralgro® at branding, 4) 36 mg Ralgro® at branding and 36 mg Ralgro® at 5 to 6 mo of age, or 5) 36 mg Ralgro® at branding and 72 mg Ralgro® at 5 to 6 mo of age. Individual, non-shrunk weights were taken at branding in May, at re-implanting in August, and at weaning in October.

Two trials were conducted in 1984 and two in 1985. The 1984 trials were summarized in the 1985 Cattlemen's Day Report. Least Square Means Procedures were used to analyze the data.

Results and Discussion

Results of these trials are shown in Table 17.1.

1985 Trials. When both 1985 trials were considered, all implant treatments significantly increased gain over controls, but there was no difference in rate of gain among Ralgro® treatments.

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[1]72 mg Ralgro® is not an approved dosage. 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, Rooks Co. and Del Jepsen, Russell Co.

[3]Extension Livestock Specialist, Northeast Kansas.

Combined 1984 and 1985 Trials. When the data from all four trials were combined, all implant treatments significantly increased gain over controls. Implanting with 36 mg of Ralgro® at branding and 72 mg at 5-6 mo of age gave the greatest gain, but the improvement was not statistically significant. Thus, there does not appear to be an advantage to increasing the dosage of Ralgro® from the approved dosage of 36 mg to 72 mg, even in high growth-rate, suckling steer calves.

Table 17.1. Results of Four Trials Comparing Various Dosages of Ralgro® for Suckling Steer Calves

	Implant Treatment				
Item	Control	36 mg	72 mg	36 mg + 36 mg	36 mg + 72 mg
No. Calves - 1985 Trials:					
Trial 1	28	26	25	27	26
Trial 2	25	26	28	28	27
Combined	53	52	53	53	53
Daily Gain, 1985 Trials, lb:					
Trial 1	1.89^{a}	1.93^{ab}	2.04^{b}	1.95^{ab}	1.97^{ab}
Trial 2	2.08^{a}	2.25^{b}	2.14^{a}	2.21^{ab}	2.33^{b}
Combined	1.98^{a}	2.09^{b}	2.09^{b}	2.08^{b}	2.15^{b}
Combined 1984 and 1985 Trials:					
No. Calves	105	106	105	105	104
Daily Gain, lb	1.93^{a}	2.02^{b}	2.03^{b}	2.01^{b}	2.07^{b}
Increase over Controls - Combined 1984 and 1985 Trials:					
Percent		4.7	5.2	4.1	7.3
Total Gain, lb[1]		13.5	15.0	12.0	21.0

[ab]Values in the same row with different superscripts differ significantly ($P<.05$).

[1]Based on 150 days from initial implant to weaning.