Comparison of Compudose®, Ralgro® and Synovex-C®[1] for Suckling Steer Calves[2]

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Summary

The comparative growth-promoting value of Compudose, Ralgro, Ralgro + Ralgro reimplant, and Synovex-C + Synovex-C reimplant was evaluated on five Kansas ranches with 674 suckling steer calves in seven trials conducted during 1982 and 1983. The Ralgro + Ralgro reimplant program increased gain significantly ($P<.05$) over controls, with an average improvement of 3.9%. Either a single Ralgro or Compudose implant at branding increased gain about 2.6%. Implanting with Synovex-C produced 1% improvement in gain.

Introduction

Implanting during the suckling period is a very economical management practice. However, the introduction of Compudose, and the anticipated introduction of Synovex-C, makes determining their relative effectiveness important.

Experimental Procedures

In trials 1 through 5, suckling, Simmental-sired steer calves on five Kansas ranches were assigned randomly at branding (2-3 mo. old) to four treatments: 1) Control - no implant, 2) Single Ralgro at branding, 3) Ralgro at branding and again mid-way through the suckling period, and 4) Compudose at branding. Individual, non-shrunk weights were taken at branding and weaning. All trials were started in late April or early May, re-implanting in August, and weaning in October. In trials 6 and 7, suckling, Simmenatal-cross steer calves on two Kansas ranches were assigned randomly to three treatments: 1) Control - no implant, 2) Ralgro at branding and reimplanted, and 3) Synovex-C at branding and reimplanted. Individual, non-shrunk weights were taken at branding, reimplanting and weaning. These trials were started in May, with reimplanting in August, and weaning in October (Table 1).

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[1] Synovex-C is a suckling calf implant being developed by Syntex Agribusiness. It contains 100 mg. Progesterone and 10 mg. Estradiol Benzoate.

[2] Appreciation is expressed to Norman Rohleder, Russell; Roger Wilson, Oberlin; Charles Griffith, Hill City; Vernon Isaac, Edson; and Gano Farms, Hill City for providing cattle and assistance with data collection and to County Extension Agricultural Agents Allen Dinkel, Decatur; Del Jepsen, Russell; and Todd Willman, Sherman, for their assistance with data collection.

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Table 18.1. Trial Length, Re-implant Day, and Number of Calves Per Treatment in Suckling Calf Implant Trials

Trial No.	Trial Length In Days	Day of Reimplant	Number of Calves Per Treatment				
			Control	Ralgro	Ralgro + Ralgro	Compudose	Synovex-C+ Synovex-C
1	153	92	13	19	20	42	—
2	175	115	13	50	19	42	—
3	175	—	9	36	—	14	—
4	182	98	13	18	31	26	—
5	187	103	9	15	43	18	—
6	151	88	40	—	42	—	42
7	174	97	32	—	36	—	32
			129	138	191	142	74

Least squares procedures were utilized to combine all seven trials and compare all five treatments. All calves were included in the analysis, including the small percent that lost their implant.

Results

Since the results of trials 1 and 2 were discussed in the 1983 Cattlemen's Day Report, Table 18.2 shows only the results of trials 3 through 5.

Table 18.2. Results of Three Trials Conducted in 1983 Comparing Ralgro and Compudose for Suckling Steer Calves

Item	Control	Ralgro	Ralgro + Ralgro	Compudose
No. Calves	31	69	74	58
Avg. Initial Wt., Lbs.	135.6	132.2	140.0	135.4
Avg. Daily Gain, Lbs.	2.06[a]	2.12[ab]	2.19[b]	2.14[ab]
Improvement Over Control	—	2.9%	6.3%	3.9%

[ab]Values with different superscripts differ significantly ($P<.01$).

Although all three implant systems improved gain over control, the increase was statistically significant only with the Ralgro reimplant program.

In trials 6 and 7, both Ralgro and Synovex-C increased ($P<.05$) gain from branding to reimplanting; however, neither implant improved gains from reimplanting to weaning (Table 18.3). Over the entire pre-weaning period, Ralgro increased ($P<.05$) gain over both control and Synovex-C.

Table 18.3. Results of two Trials Comparing Ralgro and Synovex-C with Suckling Calves.

Item	Control	Ralgro + Ralgro	Synovex-C + Synovex-C
No. Calves	72	78	74
Avg. Initial Wt., Lbs.	188.0	191.5	188.8
ADG, Branding to Reimplanting, Lbs.	2.26[a]	2.39[b]	2.34[b]
ADG, Re-implant to Weaning, Lbs.	1.81[a]	1.81[b]	1.74[a]
ADG, Branding to Weaning, Lbs.	2.07[a]	2.14[b]	2.08[a]
Improvement over Control	—	3.0%	.5%

[ab]Values with different superscripts differ significantly (P<.01)

When all seven trials were combined (Table 18.4), all products increased gain over controls. However, the improvement was significant (P<.05) only in the case of the Ralgro reimplant treatment. It should be noted that this treatment was included only in two of the seven trials and more trials may be necessary to accurately determine its value as a growth promotant. While the implant growth responses were less than commonly found in previous trials, they were still economical.

Compudose retention was monitored in these trials and about 6.9% of the implants were missing at weaning time.

Table 18.4. Results of Suckling Calf Implant Trials Evaluating Compudose, Ralgro, and Synovex-C.

Implant Treatment	No. Calves	Least Square Means ADG, Lbs.	Increase Over Control %	Increase Over Control lbs
Control	129	2.07[b]	—	—
Ralgro	138	2.13[ab]	2.9	10.2
Ralgro + Ralgro	191	2.15[a]	3.9	13.6
Compudose	142	2.12[ab]	2.4	8.5
Synovex-C + Synovex-C	74	2.09[b]	1.0	3.4

[a]Values with different superscipts are statistically different (P<.05).