Single vs. Reimplant Programs for Finishing Steers[1]

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Summary

Finishing yearling beef steers were used to compare various implant programs in a 167-day trial. All implant programs increased daily gain ranging from 6.6 to 25.4% over non-implanted controls and improved feed efficiency ranging from .5 to 13.9%. Steers implanted with Ralgro® initially and reimplanted 75 days later with Synovex-S® gained the fastest and most efficiently.

Introduction

The availability of Compudose® and its apparent 200-day period of effectiveness has generated several research trials comparing single Ralgro®, Synovex-S®, or Compudose implants to reimplanting programs. This project was designed to compare six implant treatments.

Experimental Procedure

One hundred sixty-eight Angus, Hereford and Angus x Hereford yearling steers averaging 654 lbs were allotted to six treatments: (1) non implanted control; (2) Ralgro® implant initially; (3) Ralgro® initially and Synovex-S® at day 75; (4) Synovex-S® initially; (5) Synovex-S® initially and at day 75; and (6) Compudose®. Treatments 1 and 6 were replicated 6 times with 6 steers per replicate. Treatments 2, 3, 4, and 5 had 4 replicates of 6 steers each.

Steers were purchased from one ranch in Nebraska and had not been previously implanted. A growing ration (DM basis) of 55% forage sorghum silage, 37.5% rolled milo and 7.5% supplement was fed the first 56 days and the finishing diet (DM basis) was 10% forage sorghum silage, 84% rolled milo and 6% supplement. Rumensin was added to the diet to provide 30 g per ton and Tylan, 10 g per ton. (air-dry basis).

Individual weights were taken on two consecutive days at the beginning and end of the trial. Single intermediate weights were recorded at 28-day intervals. All weights were non shrunk and taken prior to the a.m. feeding. Each steer was checked for implant retention at 28 and 56 days. Steers with lost implants were not reimplanted. Daily observations were made for abnormal behavior such as riding activity. Routine carcass and liver abscess data was collected.

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[1]Compudose® implants and partial financial assistance provided by Lilly Research Laboratories, Greenfield, Indiana. Special recognition is given to Dr. Herman Grueter for his assistance as trial monitor.

Results and Discussion

Steers in all implant treatments gained faster than the controls at all stages of the trial. Table 22.1. summarizes the data collected for the first half (84 days) and the entire 167 day feeding period. The two groups reimplanted with Synovex on day 75 gained the fastest, consumed the most daily dry matter and were the most efficient. The efficacy of a single Ralgro or Synovex, as measured by an advantage over non-implanted steers, appeared to disappear between day 85 and 112 after implantation. A single Compudose implant maintained a consistent growth level and efficiency rate during the entire trial.

No abnormal behavior activities were observed. Seven of the 36 Compudose implants could not be palpated at the end of the study and were assumed lost. There were 3 Synovex implants lost from the 72 steers implanted initially. The deep site implant location was used for the Ralgro treatments and palpation was not possible. Carcass quality traits were not affected by implant treatments.

Table 22.1. Single vs. Reimplant Programs for Finishing Steers.
(April 28-October 12, 1982)

	Implant Treatment					
Item	Control	Ralgro	Ralgro/Synovex[1]	Synovex	Synovex/Synovex[1]	Compudose
Initial wt, lb	655	654	654	652	653	653
Daily gain:						
0-84 days	2.06^{a}	2.46^{b}	2.53^{bc}	2.51^{bc}	2.57^{bc}	2.63^{c}
0-167 days	2.28^{a}	2.60^{c}	2.86^{e}	2.43^{b}	2.76^{de}	2.67^{cd}
Feed Intake (DM):						
0-84 days	19.36^{a}	19.75^{a}	20.31^{b}	20.47^{b}	20.43^{b}	20.50^{b}
0-167 days	19.70^{a}	20.33^{a}	21.36^{c}	20.98^{b}	21.32^{c}	20.94^{b}
Efficiency (DM):						
0-84 days	9.44^{a}	8.08^{b}	8.02^{b}	8.15^{b}	7.96^{bc}	7.81^{c}
0-167 days	8.66^{a}	7.84^{b}	7.46^{c}	8.62^{a}	7.73^{b}	7.86^{b}
Final wt, lb	1035	1088	1132	1059	1115	1098
Carcass data:						
Weight, lb	633	660	686	645	681	669
Dressing %	61.1	60.7	60.6	61.0	61.2	60.9
Rib eye area, sq in	11.93	12.01	12.41	11.56	11.69	11.78
Fat thickness, in	.57	.55	.51	.53	.58	.54
Cutability %	49.46	49.4	49.76	49.36	48.75	49.24
Quality grade[2]	13	12	12	13	12	13

^{a,b,c,d,e} Means on same row with different superscripts differ($P<.05$)

1 Reimplanted on day 75

2 High good = 11, Low choice = 12