Compudose® vs Ralgro®/Synovex-S® or Synovex-S®/Synovex-S®Reimplant Programs for Finishing Yearling Steers[1]

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Summary

Three field trials were conducted with finishing yearling steers to compare the performance of cattle receiving Compudose® or Ralgro®/Synovex-S® and Synovex-S®/Synovex-S® reimplant combinations. No differences were found between Compudose and the reimplant programs in cattle daily gain, feed efficiency, or cost of gain. Compudose retention was 97.5% in the 1317 head implanted. Synovex-S implant site abscess rate ranged from 5.7 to 15.4%.

Introduction

Implant companies continually modify and redesign applicators and implants with the intent of improving product response and acceptance. Development of the SX-10 implant gun by Syntex Animal Health, Inc., and Elanco Products Company's washing of Compudose® implants to remove surface estrogen and coating them with an antibiotic prior to packaging are examples.

Limited research has been conducted with Compudose and Synovex-S® since these modifications have taken place. Thus, these trials were conducted to compare steer performance using these improved products under commercial cattle feeding conditions.

Experimental Procedures

Three field trials were conducted to compare Compudose with Ralgro and/or Synovex-S reimplant programs for finishing yearling steers in three commercial feedlots. Steers receiving Compudose were implanted only once at the beginning of each trial.

In trial 1, the reimplant program included an initial Ralgro followed by a Synovex-S. In trials 2 and 3, the reimplant program consisted of an initial Synovex-S followed by another Synovex-S. The second implant was administered approximately midway through the feeding period in all trials.

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Upon arrival, the cattle were alley sorted into two treatment pens in groups of 20, 3 and 5 head, respectively, in trials 1, 2 and 3. This procedure was repeated three times at each feedyard, resulting in three pen replicates in each trial. Once the cattle in each pair of treatment pens were sorted, individual pen weights were taken and this weight was used as the on-test weight. Assignment of implant treatment to the cattle replicate pens was done at random.

After sorting and weighing, all cattle were processed in accordance with standard feedlot operating procedures. Implants were administered by a skilled technician familiar with their application. Within each trial, all cattle were fed and managed similarly according to standard operating procedures of the feedlot.

At the completion of each trial, cattle in replicate pens were weighed and slaughtered on the same day. Total cattle pen weight minus 4% pencil shrink was used as the final weight. At slaughter, cattle on the Compudose treatment were checked for implant retention. Cattle in trials 2 and 3 were inspected for Synovex-S implant site abscesses at time of reimplanting and at slaughter.

Performance data are reported on a "deads out" basis for rate of gain, feed consumption, feed conversion, and cost of gain. The data were statistically evaluated using Analysis of Variance.

Results and Discussion

Individual trial results are reported in Tables 11.1, 11.2, and 11.3. A three-trial summary is presented in Table 11.4. No differences ($P \geq .4$) were found between implant treatments for steer daily gain, feed consumption, feed conversion, or cost of gain in trials 1, 2, and 3, involving 2645 cattle.

Carcass traits were not different between treatment groups in trial 1 (Table 11.1). Compudose implanted steers tended to grade higher (58.7 vs 49.6% choice), than Synovex-S implanted steers in trial 3 (Table 11.3).

In trial 2, feed consumption 7 days prior to and after reimplanting was slightly lower in the Synovex-S group relative to the Compudose cattle (Table 11.2).

Rate of Synovex-S implant site abscesses was 13.9% for the initial implant and 15.4% for the reimplant in trial 2, and 6.6% for the initial implant and 5.7% for the reimplant in trial 3.

Compudose implant retention was 98.9, 97.1, and 95.6%, respectively, in the three trials.

Table 11.1. Comparison of Compudose and Ralgro/Synovex-S Reimplant Programs for Finishing Yearling Steers, Trial 1

Item	Compudose	Ralgro/Synovex-S
No. Pens	3	3
No. Steers	654	653
Initial Wt., lb	687	690
Final Wt., lb	1090	1095
Days on Feed	149	149
Daily Gain, lb	2.71	2.72
Daily Feed (as-fed), lb	23.74	23.85
Feed/Gain (as-fed)	8.76	8.76
Cost of Gain, $/cwt	50.86	50.86
Dressing Percentage	62.9	63.1
Percent Choice	80.2	82.0
Yield Grade 4's, %	3.3	2.3
Liver Abscesses, %	8.3	11.0
Compudose Retention, %	98.9	----

Table 11.2. Comparison of Compudose and Synovex-S/Synovex-S Reimplant Programs for Finishing Yearling Steers, Trial 2

Item	Compudose	Synovex-S/Synovex-S
No. Pens	3	3
No. Steers	209	209
Initial Wt., lb	655	656
Final Wt., lb	1038	1044
Days on Feed	136	136
Daily Gain, lb	2.83	2.87
Daily Feed (as-fed), lb	24.56	24.64
Feed/Gain	8.68	8.59
Cost of Gain, $/cwt	48.79	48.60
Daily Feed Consumption:		
7 Days Before Reimplanting, lb	24.28	24.12
7 Days After Reimplanting, lb	24.83	23.90
Implant Site Abscesses:		
Initial Implant, %	1.0	13.9
Reimplant, %	----	15.4
Compudose Retention, %	97.1	----

Table 11.3. Comparison of Compudose and Synovex-S/Synovex-S Reimplant Programs for Finishing Yearling Steers, Trial 3

Item	Compudose	Synovex-S/Synovex-S
No. Pens	3	3
No. Steers	460	460
Initial Wt., lb	638	637
Final Wt., lb	1132	1135
Days on Feed	159	159
Daily Gain, lb	3.11	3.14
Daily Feed (as-fed), lb	22.71	23.27
Feed/Gain, (as-fed)	7.30	7.41
Cost of Gain, $/cwt	43.81	44.37
Percent Buller Days	1.23	0.51
Buller Head Days	890	370
No. Treated	38	23
Percent Treated	8.26	5.00
Hospital Head Days	1037	567
Death Loss, %	1.09	0.43
Dressing Percentage	63.2	63.7
Percent Choice	58.7	49.6
Liver Abscesses, %	5.5	4.2
Liver Flukes, %	3.5	2.4
Implant Site Abscesses:		
Initial Implant, %	0.4	6.6
Reimplant, %	----	5.7
Compudose Retention, %	95.6	----

Table 11.4. Three-Trial Summary of Compudose vs Reimplant Programs for Finishing Yearling Steers

Item	Compudose	Reimplant[1]
No. Pens	9	9
No. Steers	1323	1322
Avg. Initial Wt., lb	660	661
Avg. Final Wt., lb	1087	1091
Avg. Days on Feed	148	148
Avg. Daily Gain, lb	2.88	2.91
Avg. Daily Feed (as-fed), lb	23.67	23.92
Avg. Feed/Gain, lb	8.22	8.22
Avg. Cost of Gain, $/cwt	47.66	47.78

[1]Ralgro/Synovex-S reimplant program for 3 pens and Synovex-S/Synovex-S reimplant program for 6 pens.