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Comparison of Compudose, Ralgro and Synovex-S Implants for Growing Steer Calves¹

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Summary

Four field trials were conducted to compare Ralgro, Synovex-S and Compudose implants for growing steer calves. All implant programs significantly increased ($P < .01$) average daily gain. Reimplanting with Ralgro or Synovex-S improved gain an additional 5.6% compared to the average of these implants used singly and 4.8% compared to Compudose.

Introduction

The introduction of Compudose into the implant market has made the question of which implant to use more complicated. These trials were conducted to determine the best implant program for growing steer calves under common Kansas winter feeding programs.

Experimental Procedure

Steer calves entering wintering programs on four Kansas ranches were randomly allotted to six treatments: 1) control - no implant, 2) single Ralgro, 3) single Synovex-S, 4) Ralgro + Ralgro reimplant, 5) Synovex-S + Synovex-S reimplant, and 6) single Compudose. Individual, non-shrunk weights were taken at initial implanting and at the end of the trials. Animals which lost identification tags were eliminated from the trial; however, steers which lost their implants were included in the results. One trial was dropped from the summary since the calves were not fed as planned and gains were very low. Table 20.1 illustrates the experimental details of the three trials included in the analysis.

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Results

All implant treatments increased ($P < .01$) average daily gain over controls (Table 20.2). Reimplant treatments (Ralgro + Ralgro and Synovex-S + Synovex-S) increased gain by an average of 4.8% more than Compudose although the difference was not significant ($P > .08$). Reimplanting increased gain an average of 5.6% over single implanting with either Ralgro or Synovex. Reimplanting was effective in feeding periods as short as 112 days (Trial 3), where the single Ralgro and Synovex-S treatments increased gain an average of 6.5% over controls, while the reimplant treatments increased gain 22.3% over controls. Retention of Compudose was not a major problem, with only 6 of 133 implants (4.5%) lost in the four trials.

Daily gains of calves in the trial which was not included in the analysis averaged only .38 lbs. There was no response to any implant treatment at this low rate of gain. This supports the common recommendation that cattle gains on growing programs must be at least .75 lbs/hd/day to obtain a response from implanting.

Table 20.1. Experimental Design of Trials 1, 2, and 3

Item	Trial 1	Trial 2	Trial 3
No. Steers	144	192	127
Breeding of calves	Simmental-cross	Hereford-Angus	Simmental-cross
Length of trial	185	137	112
Reimplant day	96	74	70
Initial Wt., lb	489	433	541
Daily Gain, lb	1.37	2.09	1.56
Ration	Wheat Pasture Plus Grain and Dry Forage Suppl.	Sorghum Silage Plus Milo at 1.5% Body Wt. and Protein Suppl.	Sorghum Silage Plus Milo at 1% Body Wt. and Protein Suppl.

Table 20.2. Effect of Implant Program on Daily Gains of Growing Steers - 3 Trial Summary

Implant Treatment	No. Calves	Least Square Means for Daily Gain, lb \pm S.E.	% Improvement Over Control
Control	41	1.45 ^a \pm .08	---
Ralgro	45	1.67 ^b \pm .08	15.2
Synovex-S	49	1.71 ^{bc} \pm .08	17.9
Ralgro + Ralgro	105	1.78 ^{bc} \pm .07	22.8
Synovex-S + Synovex-S	102	1.79 ^c \pm .07	23.4
Compudose	100	1.70 ^{bc} \pm .07	17.2

abc Means with different superscripts differ significantly ($P < .05$).