

# **Implant Strategies for Lightweight Stocker Calves**

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## **Story in Brief**

Two experiments were conducted to evaluate the effects of implant strategy on performance of lightweight stocker calves. Steers of Mexican origin were allotted to two separate trials to compare the effects of Encore™ (a long-acting growth promoting implant), to Ralgro™ (a 90 to 110 d implant), and Control (non-implanted) calves on their growth performance. One hundred forty (Squires) calves grazed a native range/bermudagrass mixture from start to finish of the 163-d trial, and received a 50:50 mix of soybean hulls and corn gluten feed at the rate of 4 lb/d. One hundred twenty-seven (Hulsey) calves grazed wheat from May 1 to June 1 and then went to a mixture of native range/bermudagrass until weigh-off in February for a total of 255 d. They received 5 lb/d of corn gluten feed from June 1 until weigh-off in February. The Squires' steers expressed greater differences between treatments in 163 d than Hulsey's steers did in 255 d. In the Squires trial implanted cattle gained more weight compared to non-implanted cattle and Encore™ implanted cattle tended to gain at a faster rate compared to the Ralgro™ implanted steers. In the second experiment, there was no difference in lightweight stocker cattle performance due to implant treatment.

Key Words: Implants, Stocker Cattle, Grazing

## **Introduction**

Few, if any, beef cattle management practices are more cost effective or have a higher return on investment than properly used growth promoting implants. Implants release extremely low concentrations of various hormones, or hormone-like substances that improve average daily gain 7 to 17%, and feed efficiency 4 to 12%. In stocker calves the growth response to implants depends on the quality of the forage and the supplement provided. A long-acting implant would prevent the need to gather calves again for re-implanting. The Encore™ implant is a 400-d implant as opposed to the Ralgro™ implant which is a 90- to 110-d implant. It was the intent of this study to compare performance of calves either implanted with a long-acting implant, a more traditional implant, or no implant (Control).

## **Materials and Methods**

Two studies were conducted comparing the performance of lightweight stocker steers receiving one of three implant treatments: 1) a long-acting implant (400 d) (Encore™); 2) a shorter duration implant (90 to 110 d) (Ralgro™); or 3) no implant (Control). All cattle were of Mexican origin and had been weaned, vaccinated, castrated and treated for internal and external parasites a minimum of 45 d prior to the initiation of the experiments.

Trial 1 was conducted on the Squires ranch in Latimer County, in southeast Oklahoma. On May 23, 2000, 140 steers were individually identified with numbered ear tags and weighed with an average initial weight of 283±4 lb. The steers were randomly allotted to treatment and received

the implant treatment on the same day. The cattle were turned out to graze a native range/bermudagrass mix pasture until November 2, 2000, when they were weighed off the trial for a total of 163 d. Throughout the experiment, the calves received a 50:50 mixture of soybean hulls and corn gluten feed at the rate of 4 lb/d to supplement the pasture.

Trial 2 was conducted on the Hulsey ranch in Latimer County, in southeast Oklahoma. The 127 stocker steers were individually identified with numbered ear tags and weighed with an average initial weight of 353±6 lb on May 22, 2000. The steers were allotted to treatment as described above and turned out to graze out wheat until June 1 after which they grazed a mixture of native range/bermudagrass until February 1, 2001, for a total of 255 d. The calves received 5 lb/d of corn gluten feed from June 1, 2000, to February 1, 2001, to supplement the pasture.

Data were analyzed using analyses of variance with treatment as the only independent variable. Individual animals were considered the experimental units and data for each location were analyzed and reported separately.

## Results and Discussion

Initial weight and daily weight gain for cattle in both experiments are shown in Table 1. In the Squires experiment, both implanted groups gained at a faster rate compared to Control cattle ( $P<.05$ ). The Ralgro<sup>TM</sup> implanted calves gained 6.02% faster compared to Control calves and Encore<sup>TM</sup> implanted calves gained 10.7% faster than Control cattle. Encore<sup>TM</sup> implanted cattle tended ( $P=.11$ ) to gain at a faster rate (4.4%) compared to Ralgro<sup>TM</sup> implanted cattle. Using a value of additional gain of \$.55 per pound, the Encore<sup>TM</sup> implanted calves brought \$14.53 more per head compared to the Control calves, and \$6.49 per head more than the Ralgro<sup>TM</sup> implanted calves. Given the same scenario, the Ralgro<sup>TM</sup> implanted calves brought \$8.04 per head more than the Control calves.

There were no significant differences in weight gain among treatments in the Hulsey study. The reason for the lack of response due to implant treatment is unclear.

## Implications

Results from Exp. 1 indicate that both implants increased lightweight stocker cattle weight gain and should result in improved profitability, with the longer term implant giving a greater response as would be expected over a long grazing period.

	Control	Ralgro <sup>TM</sup>	Encore <sup>TM</sup>	SEM
<b>Squires</b>				
Initial wt, lb	282	282	283	3.8
ADG, lb	1.49 <sup>a</sup>	1.58 <sup>b</sup>	1.65 <sup>b</sup>	.03
<b>Hulsey</b>				
Initial wt, lb	358	350	352	5.5
ADG, lb	1.57	1.52	1.58	.05

<sup>a,b</sup>Means within a row with different super scripts differ ( $P<.05$ ).

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