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**The Comparison of Weaning Weights for Implanted Steers, Intact Bulls and Non-Implanted Steers**

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In a terminal operation, castrating male calves at branding time is a management alternative worth exploring. However, the difference in weight gain over the summer (when feed costs are low) could be a deterrent for this practice. The objective of this project was to compare the weaning weights of intact bull calves to those that had been banded at branding. One-half of the banded calves were implanted with Ralgro to compare the economic advantage of implanting young steer calves prior to weaning.

**Cattle Management.** Data were collected on male calves born at the San Juan Basin Research Center (SJBRC) in Hesperus, CO for 2001. Calving occurred from mid-February through mid-April. Calves were branded on May 15<sup>th</sup> and pastured with their dams over the summer. Pre-weaning vaccinations and weights were taken on September 16<sup>th</sup>. Weaning occurred at approximately 7 months of age on October 1<sup>st</sup>. A post-weaning fall weight was recorded on November 2<sup>nd</sup>.

At branding, 82 calves over 45 days of age were randomly assigned across age, breed and age of dam to three treatment groups. Forty-one were left intact, 20 were banded using an elastrator and 21 were banded with an elastrator and given a 36 mg zeranol Ralgro implant. Implants were placed in the middle third on the back side of the ear. Two weeks prior to weaning, all calves were vaccinated, weighed and intact bulls were banded using a Callicrate bander. At weaning all calves were placed on a warmup program for a CSU mineral trial. A post-weaning weight was taken prior to the calves being shipped to Fort Collins.

**Traits analyzed.** . Pre-weaning (Prewean), actual weaning weight (AWW), adjusted 205-d weaning weights (205WW) and a post-weaning weight (Fallwt) were compared for the three treatment groups.

**Statistical Analysis.** The General Linear Models analysis of variance procedure of SAS (1996) was used in the analysis of the independent variable of treatment group. Least squares means for Prewean, AWW, 205WW and Fallwt were taken from this analysis.

The Least Squares Means of the weights for each of the treatment groups are presented in Table 1.

<b>Type of Treatment</b>	<b>Prewean</b>	<b>AWW</b>	<b>205WW</b>	<b>Fallwt</b>
<b>Banded at branding</b>	420	445	515	530
<b>Banded/Ralgro at branding</b>	446	472	531	539
<b>Intact</b>	454	473	537	533

Although treatment was not significant in the statistical model, the LSMs revealed a weight difference at weaning that could relate to an economic difference for the producer. While the implanted and the intact calves' weights were essentially the same at weaning, the non-implanted banded calves produced 27 fewer pounds. Given the \$105 price for feeder calves in the Fall of 2001, this weight difference would equate to \$28.35 in additional income by implanting. The cost of the Ralgro implant was \$.82, resulting in a net of \$27.53 if producers sold their steer calves at weaning.

Literature estimates report a 5 to 15% increase in daily gain with the use of an growth promoting agent such as Ralgro. This study found a 6.06% increase in gains when comparing the implanted and non-implanted calves.

Fall weights taken one month after weaning indicate that the non-implanted calves were less affected by the stress of weaning than either the implanted or intact calves. Non-implanted calves gained 85 pounds while the implanted and intact calves gained 67 and 60 pounds, respectively.

#### **LITERATURE CITED**

Griffin, Dee and Terry Mader, June, 1997. Beef Cattle Implant Update. NebGuide.

SAS Institute Inc., SAS/STAT(R) Version 8.1, Cary, NC: SAS Institute Inc., 1996.