

ABSTRACT

**Influence of Comfort on Growth, Intramuscular Fat Accretion, and Ultrasound Ribeye Area in Akaushi Steers and Heifers at Time of Weaning**

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Comfort (Ralco Agriculture; Marshall, MN) is a feed additive that contains essential oils and capsicum which are antioxidants and selectively antimicrobial. The objective of this study was to evaluate the influence of Comfort on growth, intramuscular fat (IMF) accretion, and ultrasound ribeye area (REAU) in Akaushi and Akaushi crossbred steers and heifers at time of weaning. Steers and heifers (body weight =  $257 \pm 26.8$  kg;  $n = 56$ ) were weaned on d 0 at the ranch where they were born (Flatonia, TX). On d 0 animals were weighed, ultrasound scanned, and allocated to treatment. Treatments were a negative control that received no Comfort and a Comfort treatment, received 0.23 kg·animal<sup>-1</sup>·day<sup>-1</sup> top-dressed on the ration. An equal number of steers and heifers were allocated to each treatment. Average daily high temperature was 38° C. On d 50, animals were shipped to the West Texas A&M University research feedyard (Canyon, TX); weighed and ultrasound scanned upon arrival. Data reported are the difference between d 0 and d 50 measurements. Data were analyzed using treatment as the fixed effect and individual animal as the experimental unit. Statistical analysis used PROC MIXED in SAS 9.4. Animal final BW was not different between treatments (285 COMF vs. 282 kg control;  $P = 0.77$ ). Animal average daily gain (ADG) tended to be greater in the Comfort cattle compared with the control (0.61 vs. 0.47 kg/d;  $P = 0.09$ ). Percentage IMF was significantly different between Comfort and control animals (0.14 vs. -0.12 %;  $P = 0.02$ ). Animal REAU was not different between the treatments (3.39 for Comfort vs. 3.73 cm<sup>2</sup> for control;  $P = 0.83$ ). Fat thickness was not different between Comfort (0.1397 cm) and control cattle (0.1497 cm;  $P = 0.74$ ). Data collected in this trial indicate that Comfort increased ADG and fat percentage with minimal changes to fat thickness and REAU.

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