



## Analysis of correspondence of ultrasound measures and conformation in carcass at weaning in animals Canchim

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Although the technique of ultrasound shows quite advantageous, few studies have been made with respect to the estimation of (co)variance of carcass traits obtained by ultrasound in animals created in tropical areas, and only a few estimates of heritability were recently reported in zebu and Canchim animals exclusively at the approximate age at slaughter. There aren't estimates for earlier ages in Canchim. In order to include measures to weaning, at 12 and 18 months of age, and study its relationship with other features was established an activity in ADAPT + Embrapa project. The Canchim animals studied belong to a total of 213 calves, born in 2012. Weaning occurred in April 2013. Measures ultrasound carcass *in vivo* were performed in May 2013, in all animals. Real-time ultrasound images were collected and measured using ultrasound technologies Pie Medical Scanner 200 Vet, 180 mm linear array, across on the *longissimus dorsi* muscle in the region between the 12th and 13th ribs, which allowed measurements of backfat thickness (FAT) and the ribeye area (REA). The images were saved and subsequently analyzed using the Echo Image Viewer 1.0, with a precision of one decimal place. Conformation scores to weaning (CONF) ranged from 1 to 6, the animal being rated 1 without any deposition of fat and lean muscle, and animal classified as 6 presents points of deposition of fat and muscles as well developed. Animals classified as score 3 above remain in the herd selection. Animals rated as 1 were eliminated. For analysis SAS version 9.2 package was used. The model considered the fixed effects of sex and CONF, for both traits. Comparison of adjusted means (LSMEANS)  $P < 0.05$  was used. The number of animals per class CONF respectively for REA and FAT, was 28 and 19 (score 2), 21 and 17 (score 3), 77 and 73 (score 4), 79 and 77 (score 5) and 8 and 8 (score 6). The sex effect was significant ( $P < 0.001$ ) only for REA. Adjusted means REA and FAT, respectively, for animals classified with score 2 were 34.77 cm<sup>2</sup> and 0.50 mm; with score 3 were 37.19 cm<sup>2</sup> and 0.64 mm; with score 4 were 39.88 cm<sup>2</sup> and 0.87 mm; with score 5 were 44.60 cm<sup>2</sup> and 0.96 mm; and score 6 were 48.94 cm<sup>2</sup> and 1.15 mm. There was no significant difference for REA, between scores 2 and 3, and between 3 and 4. For FAT there was a difference between animals with lower scores (2 and 3) animals with higher scores (4, 5 and 6) ( $P < 0.05$ ). Concluded that visual assessment of conformation of animals is valid, but in breeding programs with uniform herd, the use of ultrasound technology is essential for more accurate results yield of lean and fat deposition.

**Keywords:** Canchim, conformation, ribeye area, backfat thickness, ultrasonography, weaning

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