

An evaluation of breeding soundness exam administration on subsequent ultrasound body composition traits in yearling beef bulls

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The objective was to examine the influence of a Breeding Soundness Exam (i.e., BSE with electroejaculation for semen collection) on live animal carcass characteristics in the days following the BSE. Yearling bulls (Angus n=24, Hereford n=5 and Charolais n=9) completed a 120-d concentrate based development test (diets consisted of either soybean hull or corn gluten diets) at which time body weight, hip height, scrotal circumference and real-time ultrasound body composition traits were collected for longissimus muscle area, rib fat, intramuscular fat percentage (IMF) and rump fat. A blood sample was collected from each bull via caudal venipuncture and serum harvested for evaluation of cortisol and testosterone concentrations by RIA. Bull temperament scores were assessed by two individuals during handling, and respiration rates recorded by visual observation during restraint in a handling chute. Bulls were then randomly allotted to one of two groups stratified by breed and previous diet for either performance of a BSE (treatment, n = 19; Day 0) or no BSE (control, n = 18). During the BSE, electroejaculation equipment was set to a standard setting for all bulls. Bulls were returned to paddocks and diets after handling, and then ultrasound for body composition traits, collection of blood for cortisol and testosterone determinations, temperament scores and respiration rates were again collected from all bulls on day 1, 3 and 10 after initial yearling measurements and BSE. Breed of bull (P = 0.001) influenced body composition traits and respiration rates. The interaction of Day post-BSE x Breed was significant for cortisol concentrations (P = 0.067) and percent IMF (P = 0.016). Day post-BSE also influenced (P = 0.001) body weight, respiration rate, and average temperament score as well as testosterone concentrations (P = 0.004). However, a single breeding soundness evaluation, which included handling and electroejaculation, did not have a negative effect on body composition traits in yearling beef bulls.

Key Words: breeding soundness evaluation, ultrasound, beef bulls

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