

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

EVALUATION OF EQUATIONS TO PREDICT CHEMICAL BODY COMPOSITION OF DAIRY CROSSBRED CATTLE

Flávia Adriane de Sales SILVA*¹; Sebastião de Campos VALADARES FILHO¹; Letícia Artuzo GODOI¹; Herlon Meneguelli ALHADAS¹; Giseli Pereira da CRUZ¹; Patrícia Vaz de Melo MOTA¹; Lethiane Garcia ROCHA¹; Tara FELIX²

*corresponding author: flavia.sales@ufv.br

¹Universidade Federal de Viçosa, Viçosa, Minas Gerais, Brazil

²Pennsylvania State University, University Park, Pennsylvania, United States of America

We evaluated equations developed by Valadares Filho et al. (2016) that use the composition of the 9th-11th rib section to estimate carcass, non-carcass, and empty body chemical composition of dairy crossbred cattle. Thirty-three Holstein × Zebu steers, aged 19 ± 1 months old, with an initial shrunk body weight of 365 ± 11.7 kg, were used in this study. Five steers were assigned to a baseline group, four were fed at maintenance (1.17% BW), whereas 24 steers were submitted to a limit-feeding evaluation. The 24 steers fed in a feedlot for 84 d using a completely randomized design with four treatments (n = 6 steers per treatment): 1) limit-fed for 0 days, 2) limit-fed for first 28 days, 3) limit-fed for first 42 days, or 4) limit-fed for 84 days. During the limit-feeding period, steers were limit-fed to 85% of ad libitum dry matter (DM) intake. All steers were fed a diet of 40% corn silage and 60% concentrate (DM basis). After slaughter, the 9th-11th rib section was dissected into muscle, fat, and bone fractions. The remaining carcass was similarly dissected. The other parameters that were evaluated as partial predictors included the empty body weight, the visceral fat percentage, the organ and viscera percentage, and the composition of the non-carcass components. The values estimated with prediction equations were compared to the observed values. The equations failed to correctly estimate non-carcass chemical composition ($P \leq 0.03$; $CCC \leq 0.60$), overpredicting the amounts of crude protein (CP), ether extract (EE), and water. Furthermore, the equations did not correctly estimate carcass water ($P \leq 0.01$; $CCC = 0.16$). However, CP ($P \geq 0.30$, $CCC = 0.88$) and EE ($P \geq 0.06$, $CCC = 0.93$) concentrations of the carcass were correctly estimated by the equations. The equations correctly estimated the empty body chemical composition ($P \geq 0.10$; $CCC = 0.91$). Equations proposed by Valadares Filho et al. (2016) from the composition of 9th-11th rib section can correctly predict CP and EE concentrations of the carcass and empty body chemical composition of dairy crossbred cattle, but do not accurately predict the non-carcass chemical composition.

Keywords: carcass assessment, non-carcass components, rib section

Acknowledgments: This study and scholarship of the first author were supported by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPQ, Brazil), Coordenação de Pessoal de Nível Superior (CAPES, Brazil), Fundação de Amparo à

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Pesquisa do Estado de Minas Gerais (FAPEMIG, Brazil), and Instituto Nacional de Ciência e Tecnologia em Ciência Animal (INCT – CA, Brazil). Thanks are also extended to Department of Animal Science of Pennsylvania State University for the collaboration on the preparation of this abstract.

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