

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

APPARENT DIGESTIBILITY IN GRAZING BEEF CATTLE RECEIVING ENERGY SUPPLEMENTATION

Tassiane Nunes CABRAL*¹, Mariane STAHLHOFER¹, Ériton Egídio Lisboa VALENTE¹, Mariana BARBIZAN¹, Matheus Leonardi DAMASCENO¹, Brenda Vieira Rocha MELO¹, Stefani Natani dos Santos ARNDT¹, Sarah Stefany da SILVA¹

*corresponding author: marianefj@gmail.com

¹Universidade Estadual do Oeste do Paraná, Marechal Cândido Rondon, Paraná, Brasil

Energy supplementation for grazing cattle may influence diet digestibility by changing ruminal metabolic processes and nutrient utilization capacity. This study was carry out to evaluate the effect of energy supplementation on apparent digestibility coefficients of nutrients in beef cattle in tropical grasslands. Twenty-eight Nellore young bulls with average initial body weight of 325.2 ± 4.1 kg were distributed in a completely randomized design and kept in paddocks with *Urochloa brizantha* cv. Xaraés. The treatments consisted of no supplementation and supplementation in amounts equivalent to supply 15, 30 and 45% of the requirement of total digestible nutrients (TDN). The experimental period was 84 days. The requirements were calculated using the BR – Corte (2016) equations. The amount and composition of the supplement were adjusted every 28 days based on the weight gain from the previous equivalent period. The crude protein (CP) of the supplement was adjusted to complement the protein content of the forage to reach the CP requirement. The individual intake of supplement was estimated by using Cr₂O₃ mixed with the supplement, while the individual intake of forage was estimated by using the indigestible neutral detergent fiber as internal indicator. Fecal excretion was estimated through the supply of TiO₂ by the esophagus. The period of adaptation to the indicators was five days and the period of collection of feces from three consecutive days at different times. Feces samples were collected by spontaneous defecation. The apparent digestibility was calculated by the ratio of the difference between intake and excretion of the nutrient by the intake of the nutrient. The effects of linear and quadratic order of TDN levels on digestibility were evaluated by using orthogonal contrast. A 0.1 significance level was adopted. A linear effect was observed according to the TDN levels for the dry matter digestibility ($P < 0.001$) (54.22%, 56.92%, 56.91% and 63.05%), in the same way as for non-fibrous carbohydrates ($P < 0.001$) (25.64%, 39.24%, 54.36% and 68.62%) and ethereal extract ($P < 0.001$) (-12.20%, 6.98%, 30.65% and 40.40%). Quadratic effect was observed for the apparent digestibility of crude protein ($P = 0.002$) (63.62%, 65.98%, 68.87% and 63.67%), as well as for the neutral detergent fiber ($P = 0.002$) (68.85%, 66.06%, 63.50% and 67.05%) and organic matter ($P = 0.084$) (59.32%, 60.80%, 56.36% and 67.18%). The energy supplementation up to the level of 45% of TDN requirement increases dry matter digestibility in beef cattle on tropical grassland.

Keywords: intake of nutrients, Nellore, tropical grassland

Promoção e Realização:



Apoio Institucional:



Organização:

