Performance and intake of crossbred calves maintained on high grain diet fed different inclusions of coffee husk

Ludhiana Rosa FERREIRA*, Cecília Ribeiro da Mota e SILVA¹, Eloísa de Oliveira Simões SALIBA¹, Filipe Aguiar e SILVA², Andressa Nathalie NUNES³, Geraldo Sérgio Senra Carneiro BARBOSA³, André Santos de SOUZA⁴, Clarindo Inácio de Aparecida QUEIROZ³

*corresponding author: ludhianar@ufmg.br
¹Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brasil
²Zootecnista, Minas Gerais, Brasil
³Universidade Federal de Viçosa, Florestal, Minas Gerais, Brasil
⁴Universidade Federal de Minas Gerais, Montes Claros, Minas Gerais, Brasil

The search for profitability in livestock has increased the number of confinements in Brazil to meet world demand for meat. Consequently, diets with little or no participation of forage and high proportion of concentrated ingredients have been used. The energy density of these diets is a decisive factor in the finishing period, influencing animal performance, as well as carcass and meat characteristics. Coffee production produces a high volume of residues, mainly coffee husks. Studies have demonstrated the possibility of inclusion of coffee husk in substitution of corn disintegrated with straw and cob in rations of steers or in formulation of multiple mixtures for animals under pasture condition. Twenty-four crossbred calves (initial BW = 120 kg) were used to evaluate the effects of coffee husk on intake and performance. Four treatments with six calves per treatment were used in a completely randomized designed experiment. Treatments consisted of a control diet containing corn grain and commercial pelleted ration. Coffee husk were included at 0, 4, 8 and 12% of diet DM and replaced the corn grain. Diets were fed twice daily allowing 10% of leftovers. During the experiment three collection periods were performed, in each period there was five days of collection of feces, feed and leftovers per animal. The evaluation of individual intake was determined by the difference between the quantities of diets offered from leftovers. For performance evaluation, the animals were weighed every 30 days, in fast for 12 hours, until reaching the weight of 360 kg. There was no statistical difference (P>0.05) in dry matter intake (DM), crude protein (CP), neutral detergent fiber corrected for ash and protein (NDFap) and acid detergent fiber (ADF) between diets, only between periods. Average daily gain (ADG) and carcass characteristics were similar among treatments (P>0.05). The inclusion of 12% of coffee husk in dry matter of diet does not alter the nutrient intake and performance of confined crossbred calves receiving a high grain diet.

Keywords: bovine, coffee byproduct, nutrition