

### **Plasma concentration and urinary excretion of heifers finished with different inclusions of palm kernel cake**

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The growth of the world population is a reality, consequently, the demand for beef is expected to increase gradually. In the production of confined cattle, diets rich in concentrate are used in a large scale, and when it comes to efficient production, alternatives that minimizes production costs are desirable, potentializing the use of coproducts. Then, the objective was to evaluate the plasma concentration and urinary excretion of heifers finished with different palm kernel cake levels inclusion. The experiment was conducted in municipality of Ribeirão do Largo, Bahia. It was used 48 crossbred heifers, which 28 were aneloras and 20 crossbred girolando, with a mean initial weight of 274 kg and an average age of 24 months. It was used 12 animals per treatment in a randomized block design. Each group was distributed to the treatments, which consisted of four levels of palm kernel cake (0, 10, 20, 30%) inclusion on the total diet. The animals were allocated in a confinement area of 400 m<sup>2</sup>, divided into four proportional bays. Blood and urine samples were collected from each animal approximately four hours after the provision of diet in the morning. The results were statistically interpreted through analysis of variance and regression, with a probability of error of 0.05. Plasma concentration and urinary excretion of urea nitrogen (N-ureic) were not influenced ( $P>0.05$ ) by inclusion levels of palm kernel cake on the total diet for finishing heifers. The mean N-ureic in the serum value was 13.3 mg dL and the mean urinary excretion of N-ureic was 7.0 g day<sup>-1</sup>. With the percentage reduction of the non-fibrous carbohydrate of the diets the average in which the level of cake was raised, an increase N-ureic concentration in the plasma and its excretion was expected. However, plasma concentrations remained stable with the inclusion of palm kernel cake, a fact that can be explained by the increase in the indigestible nitrogen content in acid detergent providing the cake in the diets, associated to the reduction of non-fibrous carbohydrates, and increase of fibers of low degradation, causing the fractions to decrease proportionally, possibly indicating the synchrony and an adequate balance between the nutrients. Therefore, the palm kernel cake did not influence the plasma concentration and urinary excretion of heifers.

**Keywords:** blood, cattle, confinement, coproduct, urine

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