



### **Serum levels of glucose and urea blood in suckling calves of the Pantaneira breed fed with *Moringa oleifera***

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The breast-feeding is the most critical in the creation of early weaned calves, due to the higher susceptibility to disease. Thus, monitoring of serum levels is a paramount importance to know the nutritional status of the neonate. With this if aimed through this study to evaluate the influence of diet on concentrations of glucose and urea blood. Were used 10 newborn calves of Pantaneira breed in two treatments and five replications, each experimental unit represented by one animal. The calves were divided according to body weight at birth and sex. The diets tested were: T1: Concentrate (control) and T2: Concentrate more moringa hay (*Moringa oleifera*). Besides the solid diet each animal also received 3.0 liters of milk (10% of body weight), divided into two equal meals, after milking the cows, which occurred 5:00 a.m. and 17:00 Hrs. The calves were kept in individual houses, which were offered diets of their treatments, besides fresh water ad libitum. The concentrate ration consisted of 61.5% of ground corn, 32.5% toasted soybean meal, 5% molasses and 1% mineral salt. The effects of different treatments on each variable were compared by Tukey test at 5% probability. Sex was removed from the model by not showing differences. Blood samples were collected at birth and later in 14, 35, 56 and 77 days, directly into the tail vein 4 hours after the morning feeding. The blood was poured into vacutainer tubes containing two drops of heparin to prevent clotting, and immediately centrifuged and the serum used for analysis of levels of glucose, urea-N by using commercial kits (Labtest®). Glucose concentrations were 74.41 mg/dL in animals control and 75.67 mg/dl in the treatment of hay Moringa ( $p > 0.05$ ). Urea levels were 16.13 and 17.46 mg/dL ( $p > 0.05$ ) for calves fed concentrate (T1) and moringa (T2), respectively. The similarity of serum levels between the treatments is associated with the consumption of dry matter 0.108 kg/day for T1 and 0.136 kg/day to T2, and the high availability of dietary nutrients, especially of *Moringa oleifera*.

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