

EFFECT OF AN UNBALANCED CA/P DIET ON BLOOD PARAMETERS AND UROLITHIASIS IN GROWING CALVES

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Summary. The influence of minerals on the urolithiasis syndrome is characterized by high phosphorus (P), calcium (Ca), magnesium (Mg), urea and creatinine serum levels. The aim of this study was to evaluate the influence of an unbalanced Calcium /Phosphorus (Ca/P) diet on blood parameters in beef cattle with a high risk of urolithiasis. Sixty-eight beef calves were divided into 2 groups on the basis of their age (40-days old and one year old calves). The two groups, A and B, were monitored during 3 different periods, lasting each 40 days and, during the first two periods, the animals were fed according to the farming practices. Then they were fed with two different diets from 80th to 120th days. The first diet was characterized by a Ca/P ratio of 1:3 (moisture 13.4%) and the second one was constituted by an elevated moisture percentage (28.71%), and a Ca/P ratio of 1:1. During the three periods blood samples were collected to assess serum urea, creatinine, Ca, P, Mg and potassium (K). This study suggests that Ca/P ratio in the diet plays an important role in reducing the occurrence of mineral calculi in beef cattle, and that a good balanced diet could have an important preventive role for this pathology.

Keywords: Ca/P ratio, urolithiasis, cattle, blood parameters, diet minerals.