WEIGHT OF CALVES VISCERAL ORGANS UNDER DIFFERENT LEVELS OF WHEY CHEESE REPLACING WHOLE MILK

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The study of the non-carcass components should be considered because the carcass yield is directly influenced by the development of the internal organs. In addition, they can also be used for revenue generation, either by selling in bulk, or by adding value to the manufacture of sausages and the like. The objective of this study was to evaluate the internal organs weight of the dairy calves fed with cheese whey. Twenty four crossbred calves were used, with 5 ± 3 days of age and initial average weight of 35 kg. The animals were distributed in completely randomized design (CRD) with four treatments and six replicates: whole milk; powdered milk; 80% milk powder + 20% whey powder; 60% milk powder + 40% whey powder cheese. The calves received colostrum from birth day to three days of life and from the fourth to the tenth day integral milk, as farm routine. The animals adaptation comprised ten days prior to the experiment beginning. The animals had access to concentrate, Tifton hay and water. At 60 days of age they were weighed and underwent a fast for 16 hours. In the following morning, they were weighed and slaughtered, obtaining slaughter weight. After slaughter, the organs were weighed and recorded. The effects of the different treatments on each variable were compared using the Tukey test, at a 5% probability level. The tested liquid diets had no effect on organ weights (liver, kidney, spleen, lungs and heart) with an average weight of 0.99, 0.36, 0.18, 0.71 and 0.34 kg respectively. The internal organs have high metabolic rates and, mainly, the liver respond by changes in food intake, which was not observed in this research. The heart and lungs maintain their integrity, demonstrating priority in the nutrients use. Although the kidneys and the spleen, despite having lower priority than the heart and lungs, did not present differences between the diets, meaning that they provided adequate growth to the organs, since they were similar to those obtained with the use of the control diet, possibly because the animals were fed diets containing similar energy concentrations. The diets tested did not interfere in the weight of the visceral organs of the evaluated animals, being it possible to substitute the whole milk for diets based on whey powder cheese and powdered milk without impairing the calves development.

Keywords: carcass, substitute, viscera.