

EFFECT OF PREBIOTIC PREPARATIONS ON THE ASSIMILATION OF NUTRIENTS IN DIFFERENT BREEDS OF PUPPIES

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Abstract. The aim of this study is to define the effect of prebiotic preparation containing fructooligosaccharides and mannanoligosaccharides on the assimilation of nutrients, healthiness and eco-friendliness in different breeds of puppies. Three different types of breeds – small, medium and large – were selected for the experiment. Puppies in the experimental group were preventively given a supplement of fructooligosaccharides and mannanoligosaccharides. Duration of the clinical observation was 60 days, divided into two periods – up to 30 and from 30 days old of puppies. Prebiotic preparation influenced the assimilation of different nutrients. The coefficient of crude protein digestibility in the experimental group of small breed puppies was by 1.30%, in puppies of medium breed by 2.29%, and in puppies of large breed by 0.15% higher in the first period. In the second period, the coefficient of crude protein digestibility in the experimental group of small breed puppies was by 0.89%, in medium breed puppies by 3.13% ($p<0.01$), and in large breed puppies by 1.84% higher. The coefficient of crude fibre digestibility was determined to puppies from 30 days old. In the experimental group of small breed puppies the coefficient of digestibility was by 0.79%, in medium breed puppies by 0.36% and in large breed puppies by 0.33% higher. The prebiotic preparations had a positive effect on the crude ash digestibility only in the experimental group of small breed puppies up to 30 days old – by 18.26% higher ($p<0.001$) – and in the experimental group of medium breed puppies from 30 days old – by 14.96% higher ($p<0.001$). The puppies, which received the prebiotic preparation, defecated easier, their faeces consistency was harder and the amount of faeces was smaller.

Keywords: puppies, fructooligosaccharides, mannanoligosaccharides, nutrients, digestibility.