

EFFECT OF PROBIOTIC PREPARATIONS ON THE GROWTH AND ASSIMILATION OF NUTRITIVE SUBSTANCES IN DIFFERENT BREEDS OF PUPPIES

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Abstract. A newborn puppy faces the environment being absolutely sterile and during relatively short time acquires microflora typical for the species. The digestive system of the dog is constantly affected by harmful environmental factors. Due to these factors, the balance of microorganisms prevailing in the intestine system is disturbed and consequently the probability to get sick with the diseases of digestive system is increasing. Probiotics are bacterial preparations of live cultures of microorganisms intended for the correction and treatment of the digestive system microflora. Probiotics, contrarily to antibiotics, have no negative effect on normal microflora. For this reason probiotics are widely used for prevention and treatment of disbacteriosis.

During the investigation, immediately after the birth puppies of three different breeds were given 5 g of probiotic preparation „Fermactiv“. It was defined that probiotics positively affected the daily weight gain of the puppies: for the puppies of small breeds the daily weight gain was on the average by 10.7%, medium breeds by 2.1%, and large breeds by 0.75% higher compared to the control group of puppies.

Probiotic preparation „Fermactiv“ had an influence on the assimilation of different nutritive substances as well. It was defined that small breeds of puppies given probiotics were able to assimilate crude fat by 1.59% and organic matter by 3.43% better compared to the control group. Puppies of medium breeds assimilated dry matter by 7.66% ($p<0.01$), fat by 0.14%, fiber by 1.72% ($p<0.05$), and organic matter by 1.58% better. Puppies of large breeds assimilated dry matter by 1.34% ($p<0.001$), crude protein by 2.09% ($p<0.05$), crude fat by 0.68% ($p<0.001$), crude fiber by 8.82% ($p<0.001$), crude ash by 10.06% ($p<0.001$), and organic matter by 6.72% ($p<0.001$) more effectively than the control group.

It was defined that the probiotic treatment influenced the blood chemical composition. Compared with the control group, blood glucose and cholesterol levels in all breeds of puppies decreased, whereas total protein and calcium levels became higher.

Keywords: probiotics, puppies, assimilation, daily weight gain.