USE OF MANNANOLIGOSACCHARIDES IN DRY FOOD „ARATON“ COMPOSITION FOR FEEDING GERMAN SHEPHERD PUPPIES

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Abstract. In the present study we used adult large breed dogs for feeding dry complete food, containing 0.1 % of prebiotic mannanoligosaccharide. This is an indigestible component in dog's organism which improves the digestive tract microflora, inhibiting undesirable bacteria colonization. Sugar compound, lactobacillus and bifidobacterium contained in this prebiotic aid energy synthesis. This is rather important from nutritional point of view.

Mannanoligosaccharide in dry pet food composition had a positive effect on the growth of German Shepherd puppies from birth to weaning. The body weight of the puppies at birth was 490.6 grams, and at weaning they weighed 7240.2 grams or by 290.2 grams ($p<0.001$) more compared with controls. The body weight gain was by 4.37 % higher in the experimental group ($p<0.001$) compared with the control group.

Under the effect of prebiotics, the humidity of faeces was 69.18 %. The content of moisture in faeces of dogs fed with food chow without prebiotics, was by 3.56 % ($p<0.01$). In the faeces of experimental puppies also larger quantities of nutrients were identified, because there is a rule that the richer is the sample in dry material, the richer it is in proteins, fats and other components. The dry material in the faeces of experimental puppies accounted for 30.82 %, i.e. its content was by 3.56 % higher than that in the faeces of control puppies.($p<0.01$). The faeces of experimental animals contained 27.80 % of organic matter. In the control group the rates were lower by 1.99 % (organic matter ($p<0.05$), 0.35 % (green ash) and 0.51 % (crude fiber). The differences in crude protein and crude fat between the groups were very blurred.

Digestibility of dry matter in the control group was 73.09 %, in the test group by 2.72 % higher ($p<0.001$); crude protein 75.21 %, in test group by 3.04 % higher ($p<0.001$); crude fat 96.63 %, in the test group by 2.84 % higher ($p<0.001$); crude fiber 22.61 %, in the test group by 2.03 % higher ($p<0.001$); crude ash 7.01 %, in the test group by 0.87 % higher ($p<0.001$).

Keywords: prebiotic, mannanoligosaccharides, chow, faeces, digestibility, increase of body weight.