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DEVELOPMENT OF GOBLET INTESTINAL CELLS OF BROILERS IN CASE OF INTRODUCING *BACILLUS SUBTILIS* SPORES INTO THE DIET

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ABSTRACT

The purpose of this work was to identify the features of the location and distribution of GCs with neutral and acidic secretions in the duodenum, jejunum, and proximal part of the caecum. The paper presents the results of a study of the development of goblet intestinal cells and the influence of *Bacillus subtilis* spores on this process. The study was carried out at the educational and experimental poultry house of the Russian State Agrarian University, Moscow Agricultural Academy named after K.A. Timiryazev. Broilers of the Konkurent cross were used, from which two groups of 50 heads were formed by the method of pairs of analogs in live weight. In the first three days of life, chickens of the experimental group apart from the basic diet received the Vetom-1.1 probiotic containing Bacillus subtilis spores (0.006%). From the age of four days, all chickens received the basic diet. The duration of the experiment was 42 days. The density of the location of goblet cells with acid secret decreases in all parts of the intestine, except for the crypts of the caecum in broilers of the experimental group. In the broilers of the experimental group, immediately after feeding the preparation, there was a significant increase in the density of goblet cells with a neutral secret in the villi of the duodenum by 22.2% ($P<0.01$), the crypts of the jejunum by 30.8% ($P<0.001$) and a decrease in the villi of the jejunum by 13.8% ($P<0.01$). By the end of the experiment, the density of GCs in the villi of the duodenum had increased slightly, and in the crypts of the jejunum and caecum, the number of cells with acid secret had increased.

Keywords: poultry farming, probiotics, Vetom, mucous membrane, villi, crypts