

THE IMPACT OF A BIOFILM REMOVAL FROM WATER SUPPLY SYSTEMS ON THE PRODUCTIVITY OF CHICKENS AND THE BALANCE OF MINERAL SUBSTANCES

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Abstract. Most of the branches of agricultural industry are aimed at the production of qualitative, safe and a wide range of products, and this is particularly relevant in poultry farming. One of the potential sources of poultry infection is water because through it pathogens of salmonellosis and campylobacteriosis infections are transferred to the entire flock on the farm. The trial included two groups (trial and control) with 27 600 one-day-old chickens in each. The drinking water of the chickens of the trial group was treated with the device AQUA 4DPRO60 which treats water with electromagnetic vibrations and destroys the biofilm. Moreover, this device also influences different processes taking place in the water. The following results were obtained: better growth of the birds ($p<0.05$), the improved liveability and significantly decreased litter moisture ($p<0.05$). The amounts of major minerals in the blood serum of birds were within the physiological limits. The amount of phosphorus and calcium in tibia of the birds in the trial group was higher in comparison with the control group ($p<0.05$).

Keywords: chickens, drinking water, biofilm, productivity, mineral substances.