

THE INFLUENCE OF DIFFERENT LEVELS OF CALCIUM AND PHOSPHORUS ON SERUM MORPHOLOGICAL PARAMETERS IN CHICKENS

Virginija Jarulė¹, Romas Gružasuskas¹, Asta Racevičiūtė-Stupelienė¹, Vilma Šašytė¹, Agila Semaškaitė¹, Romas Ruibys²

¹*Department of Animal Husbandry, Lithuanian Veterinary Academy, Tilžės str. 18, LT-47181 Kaunas, Lithuania*
Tel./fax.: +37037 363505, e-mail: bandzaite@lva.lt

²*Lithuanian University of Agriculture, Noreikiškės, LT-4324, Kaunas-Akademija, Lithuania*

Summary. The objective of this experiment was to investigate the influence of monocalcium phosphate and available phosphorus in the feed on the physiological state, productivity, feed intake, feed conversion ratio and mortality of chickens. Eight hundred ROSS 208 line 1 days age chickens were divided into 4 equal groups (Groups 1-4) with 200 chickens in each. The experiment lasted for 35 days. Chickens were fed *ad libitum* – Group 1 (controls), Groups 2-4 (experimental) with diet supplemented 1,3%, 0,45%, 1,45% and 2,45% of monocalcium phosphate, and 0,44%, 0,4%, 0,6% and 0,8% of available phosphorus, respectively. The chickens were weighed on 1, 8, 25 and 35 day of experiment and the consumption of feed was detected. At the end of experiment blood samples were collected from the underwing vein for detection of calcium (Ca) and phosphorus (P) levels in serum. This experiment demonstrated that for the optimal feed utilization and weight ratio, Ca/P ratio in the feed of chickens was in the level of 2–2.4:1, and available phosphorus – from 0.4 to 0.44% (Group 2). It was shown statistically significant correlation between phosphorus content in the feed and in serum of chickens. Further, pH corresponded physiological rate in all groups and showed the possibility of chickens to compensate the enlarged phosphorus content in the feed.

Keywords: broiler chickens, monocalcium phosphate, calcium, phosphorus.