EFFECTIVENESS AND POTENTIAL USEFULNESS OF DIETARY SUPPLEMENTATION WITH SAPROPEL ON DUCKLINGS AND GOSLINGS GROWTH AND QUALITY INDICES

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Abstract. The effectiveness of complex diet supplementation with organic sapropel was assayed in order to find natural, safe and native feed for young poultry. Sapropel effectiveness of appointed chemical composition was evaluated considering body mass, digestibility, development of the digestive tract and meat quality indices of duckling and gosling. Organic sapropel (pH 7.0) seems to be perspective for diet supplement due to sufficient content of organic material (86.5%), 2.06% N and 12.70% minerals in dry material (DM). Rates of nitrate (409.01 mg kg^{-1}) and noxious for health and environment heavy metals (1.72–10.01 mg kg^{-1}) did not exceed safety quotas. 7 essential, 3 conditionally essential (His, Tyr and Arg) and limiting (Lys, Trp, Met, Cys) amino acids proved the sapropel suitability for young poultry feeding. Ducklings diet supplemented with 6% of sapropel and goslings not supplemented with it (control group, CG) resulted in the most effective feed conversion rate (3.62 and 3.83 respectively). Meal-based diet supplemented with 9% of sapropel resulted in the highest body mass: 1931 and 2704 g of 40 and 50 days ducklings; 1766 and 3772 g of 20 and 60 days goslings respectively. 9% sapropel supplementation increased body mass of 50 days ducklings and 60 days goslings by 5% and 9% points respectively. Ducklings diet supplemented with 9% sapropel caused better feed assimilation with the highest meat yield (66.7%) exceeding CG by 1.6%. Also 1.7% and 1.1% increase of DM and fat, respectively, in duckling carcass meat were observed. However, the meat quality indices of goslings occurred to be better of CG than those of the 4th experimental group supplemented with 9% of sapropel; possibly due to larger body–build and nutritious needs than that of ducklings.

Keywords: sapropel, duckling, gosling, digestibility, body gain, meat quality.