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Nutrition and production of non-ruminants

Carcass yield of chickens at 42 days of age supplemented with different levels of lysine

Guilherme Dantas Cordeiro*, Renan Alves de Sousa, Anderson Caio da Silva, Leandro Ricardo Rodrigues de Lucena, Mônica Calixto Ribeiro de Holanda, Marco Aurélio Carneiro de Holanda.

¹Universidade Federal Rural de Pernambuco, Serra Talhada/Pernambuco, Brazil;
guilhermedantas8558@gmail.com*, renansousaa105@gmail.com, andersoncaio2002@gmail.com,
leandroricardo_est@yahoo.com.br, monica.holanda@ufrpe.br, marco.holanda@ufrpe.br

The aim was to determine the nutritional requirement of digestible lysine for male broilers of the Cobb line from one to 42 days of age and its effects on the yield of carcasses and carcass component parts. The experiment was approved under CEUA-UFRPE license no. 1433081220. Three trials were carried out, evaluating phases from 1 to 7 (trial 1), and from 8 to 21 (trial 2) and from 22 to 35 (trial 3) and from 36 to 42 days of age (trial 4). The diets differed in terms of digestible lysine levels, maintaining the relationship of other amino acids with lysine following the concept of ideal protein. Five digestible lysine treatments were used in the diet of animals up to 7 days of age: 1.12; 1.24; 1.36; 1.48 and 1.60%, after 7 days of age: 1.02; 1.16; 1.30; 1.44; 1.58% and from 22 to 35 days 0.99; 1.11; 1.23; 1.35; 1.47% and from 36 to 42 days of age 0.82; 0.94; 1.06; 1.18; 1.30%. In each of the tests, 450 animals of the Cobb-500® lineage were used, distributed in 25 experimental units of 18 birds each. To evaluate the yield of carcasses and their noble parts depending on the levels of lysine in the diet, the birds were taken to the industrial slaughterhouse of Grupo Pajeú Ltda. Where they were stunned by immersion in brine with an electric current and slaughtered by incision of the jugular vein, plucked and eviscerated. The parameters of carcass yield and its parts were: hot carcass weight (PCQ, g), cold carcass weight (PCF, g), full carcass weight (PCC, g), empty carcass weight (PCV, g), breast weight (W, g), thigh weight (Cx, g) and thigh weight (Sc, g) absolute and relative weights of heart (L, g), liver (F, g), abdominal fat (Ga, g), full gizzard (Mc, g) and empty gizzard (Mv, g) which were noted on control sheets per treatment and their respective repetitions. The results obtained were tested for homogeneity and homocesticity and subjected to analysis of variance and regression test, using the computer program R Project 2.13.1 for Windows, and for analysis of significance, Fisher's test at 5% of probability. The variables live weight, full and empty carcass, wings, thighs, drumsticks, breast, back and edible viscera, heart, liver and gizzard and abdominal fat did not show statistical differences between treatments ($P>0.05$), presenting the coefficients of variation quite homogeneous. However, the values of the coefficients of variation for the cuts of carcass parts do not only vary depending on the diets consumed by the birds during the experimental period, but can also vary depending on the skill of the individual carrying out the cuts, the more trained the individual is. the smaller the variation in cuts will be. It was concluded that the average levels of digestible lysine used in this experiment did not influence the carcass yield of the birds.

Keywords: Chicken breast, thighs, drumsticks, liver, heart, gizzard.