



## **I-INTERNATIONAL MEETING OF ANIMAL SCIENCE IN SEMI-ARID REGIONS**

*Universidade Federal do Agreste de Pernambuco – UFAPE*  
July 03<sup>rd</sup> to 05<sup>th</sup>, 2024, Garanhuns-PE

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Work Area: Nutrition of non-ruminantes

### **Digestible lysine requirements in broiler rearing in the growing and finishing phase**

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The experiment was carried out on the Fazenda São João farm, located in the district of Santa Rita, municipality of Serra Talhada-PE, under license CEUA-UFRPE n. 1433081220. The objective of the study was to determine the digestible lysine requirement for birds of the Cobb lineage in the period from 22 to 42 days of age, in two periods: growth phase (22 to 35 days of age) and finishing phase (36 to 42 days of age). 450 22-day-old male Cobb® broiler chicks were used, arranged in a completely randomized experimental design with five treatments and five replications, totaling 25 experimental units, with each experimental unit consisting of 18 birds. The treatments in each trial consisted of different levels of digestible lysine in the diets, namely: first trial (growth phase, from 22 to 35 days of age) 0.99; 1.11; 1.23; 1.35; 1.47%. Second test (finishing phase, from 36 to 42 days of age): 0.82; 0.94; 1.06; 1.18; 1.30%. The experimental diets were formulated to meet the nutritional requirements described by Rostagno et. al., (2017), differing in the levels of digestible lysine, maintaining the relationship of other essential amino acids following the concept of ideal protein. The parameters evaluated were average daily weight gain (GPMD, g/bird), daily feed intake (CRD, g/bird), daily lysine intake (CLD, g/bird) and feed conversion (FCR, g/g). The observed data were subjected to analysis of variance (ANOVA), and regression analyzes were subsequently carried out, considering the levels of digestible lysine in the feed as an independent variable, using the F and Tukey tests with a significance level at 5% probability ( $P < 0.05$ ). The data were entered into an Excel spreadsheet and the analyzes were carried out using the software R-Project version 2.13.1 for Windows. It was concluded that the best level of digestible lysine in diets for the growing and finishing phases is 0.93%.

**Key words: Feed conversion; weight gain; amino acids.**