

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## REPLACEMENT OF METHIONINE WITH CHOLINE IN THE DIET FOR GROWING MEAT-TYPE QUAILS

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The goal of this study was to determine the best level of partial replacement of digestible methionine (Metd) with choline (CHO) in the diet of quails (*Coturnix coturnix coturnix*) from 1 to 14 days of age. The experiment was carried out in accordance with the standards of the Ethics Committee on Animal Experimentation of UEM (Protocol nº 071/2013). Quails (n=2400), not sexed, were distributed in a 4x4 factorial, completely randomized design, with four levels of Metd (0.48; 0.54; 0.60 and 0.66%), and four levels of CHO (0300; 800; 1300 and 1800 mg/kg), totaling 16 treatments, with three replicates of 50 quails per experimental unit. Quails were fed rations prepared to meet nutritional requirements based on corn and soybean meal, using previously determined aminograms. To meet the cystine requirement of the diet was used L-cystine. Different levels of digestible methionine and choline were used in the diets using DL-methionine and choline chloride. Quails and rations were weighed weekly to obtain the values of average weight (BW), weight gain (WG), feed intake (FI), feed conversion (FC) and accumulated body biomass (ABB) of birds. Data of the experiment were analyzed by polynomial regression using the SAS software (SAS Inst. Inc., Cary, NC). No interaction effect was found between the levels of Metd and CHO on performance variables from one to 14 days of age in meat-type quails, but the BW, WG, ABB and FC were linearly influenced by dietary Metd levels (BW, P = 0.058) (WG, P=0.050) (ABB, P=0.022) (FC, P=0.019) and CHO (BW, P=0.002) (WG, P=0.002) (ABB, P=0.012) (FC, P=0.017). It is concluded that the requirement of Metd for the maximum performance of meat-type quails from one to 14 days of age was at least 0.66% of Metd in the diet. At the CHO levels supplemented, it was not possible to promote the complementation of the requirement of Metd.

**Keywords:** cystine, *Coturnix coturnix coturnix*, feed conversion, performance

Promoção e Realização:



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Organização:

