

Methionine plus cystine requirements for pullets from 13 to 18 weeks of age

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It is well established that layer egg production is reflecting pullet initial rearing phases. A better knowledge of the accurate nutrient and TSAA need for these birds is essential for a sustainable development of egg production. Thus, the aim of this study was to evaluate the Met + Cys dietary requirement of layers from 13 to 18 weeks of age, based on growth performance. This study compared two nutritional recommendations currently used NRC (1994) and Rostagno *et al.* (2005). The study was conducted at Federal University of Paraíba, Brazil. A total of 480 birds were allocated in completely randomized design with 6 treatments and 10 replicates of 8 birds each. The experimental diets were formulated for supplying the recommendations proposed by NRC (1994) and Brazilian Tables for poultry and swine (Rostagno *et al.* 2005). The treatments were: T1: corresponding to NRC (1994); T2 to T6 corresponding to Brazilian table nutrients recommendation with a range of 80% to 120% of the TSAA recommendations suggested by Rostagno *et al.* (2005), with T2: 80%; T3: 90%; T4: 100%; T5: 110% and T6: 120%. Our results show that NRC (1994) TSAA recommendations gave the lowest final body weight and weight gain; moreover, these birds had also the highest feed intake compared to other treatments, leading to highest numerical FCR. For diets formulated using the recommendations suggested by Rostagno *et al.* (2005), while there was no effect of treatments on feed intake, there was a significant ($p < 0.01$) linear increase for final body weight and weight gain, and consequently a significant linear ($p < 0.01$) decrease in feed conversion ratio. These results show that neither NRC (1994) nor Brazilian Table (Rostagno *et al.* 2005) recommendations allow reaching maximum performance and that TSAA requirement for replacement light pullets from 13 to 18 weeks of age is underestimate. Finally, the best results on growth and feed conversion ratio were observed when the supply of nutrients was based on Brazilian Tables nutrients recommendation with digestible Met + Cys corresponded to 120% of recommended level.

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