

The influence of copper of the total sulphur amino acids requirement of broilers during two growing periods

ABSTRACT

A study was conducted to assess the influence of copper on the total sulphur amino acid requirements of broiler chickens reared under two growing periods. The TSAA levels used were 0.73, 0.83, 0.93% with copper levels of 0, 125, 250 and 375 mg/kg for the starter period and the TSAA levels of 0.72, 0.79 and 0.86% with copper levels of 0, 125, 250 and 375 mg/kg for the grower period. Total feed consumption, body weight gain and feed L gain ratio were used as the parameters for the assessment. The results showed that adding copper at 250 mg/kg to the diets improved feed : gain ratio of the starter broilers and resulted in small improvement of body weight gain and feed : gain ratio of the grower broilers. Growth was depressed in relation to the reduction of feed intake on the chicks fed diet containing 375 mg/kg copper. There was a significant interaction between dietary TSAA and copper levels for feed intake, hence, indicating that the supplementation of copper at the level of 375 mg/kg increased the TSAA requirement of the starter broilers, although no interference with the requirement of grower broilers.

Keyword: Copper; Feed : gain ratio; Feed intake; Starter and grower broilers; Total sulphur amino acid; Weight gain