

Growth performance and blood parameters as influenced by different levels of dietary Arginine in broiler chickens.

ABSTRACT

An experiment was conducted to determine effects of dietary Arginine (ARG) on growth performance and blood serum parameters in broiler chickens. A corn-soybean meal based diet containing different levels of ARG (0, 0.67, 1.37, 2.07 and 2.77) for the starter (0, 0.53, 1.1, 1.68 and 2.25) for the grower and (0, 0.52, 1.04, 1.56 and 2.08) for the finisher was used. In a completely randomized design with five treatments of five replicates each and 10 chickens per replicate, 250 Cobb 500 male broiler chickens from 0-49 days of age were used. Growth performance (body weight gain, feed intake and feed: gain ratio) and blood serum (albumin, total protein, glucose, cholesterol, triglyceride, urea, uric acid, aspartate amino-transferase, alanine amino-transferase, alkaline phosphatase, lactic dehydrogenase and creatine kinase) parameters were measured at 27 and 49 days of age. Increase of dietary ARG increased ($p < 0.05$) body weight gain, feed intake, albumin, creatine kinase, glucose, urea and uric acid and decreased ($p > 0.05$) aspartate amino-transferase and cholesterol. It was concluded that dietary ARG might have positive effects on health status of the broiler chickens.

Keyword: Amino-transferase; Arginine; Blood parameter; Broiler chicken; Cholesterol; Growth performance.