

Effects of levels of L-Leucine supplementation with sub-optimal protein in the diet of grower-finisher broiler chickens on carcass composition and sensory characteristics.

ABSTRACT

An experiment involving 180 straight run one-day-Cobb broilers was conducted to evaluate the effect of supplementation of L-leucine with different levels of crude protein (CP) on carcass composition and sensory characteristics of broiler grower-finisher chickens. Six experimental diets comprising two levels of crude protein (CP) i.e., 20 and 20% with three levels of L-leucine i.e. 0, 0.5 and 0.67%, were offered to birds from 21-42 d of age. The birds were randomly divided into 36 experimental pens, 5 chickens in each pen, and there were 6 replicates under each diet. L-leucine supplementation did not affect the bone and lean, whereas fat was decreased ($p < 0.05$) when L-leucine was added at 0.5%. Similarly, there were no significant differences ($p > 0.05$) in the lean, fat and bone among chickens fed two levels of CP. No significant differences between dietary treatments were observed on any sensory characteristics affected by dietary L-leucine and CP. From this study, it is obvious that supplementation of up to 0.5% L-leucine reduced fat. However, other characteristics were not affected by supplementation of L-leucine. Similarly, reduction of body composition and sensory characteristics were not apparent on a diet low in CP

Keyword: Broiler; Carcass composition and sensory characteristics; Crude protein; L-leucine.