

Effects of varying levels of L-leucine and metabolizable energy in finisher diet on carcass composition and meat sensory characteristics of broiler chickens

ABSTRACT

A study was conducted to evaluate the effects of leucine supplementation in grower-finisher diets containing varying levels of energy on the sensory characteristics and carcass composition of broiler chickens. In a 2×2 factorial arrangement, eighty 21-day old Cobb broiler chicks were divided into 16 groups and fed diets supplemented with 0 or 0.5 % L-leucine and metabolizable energy (ME) concentration at either 3200 kcal/kg or 3000 kcal/kg, for three weeks. Feed intake, growth performance and feed conversion ration were determined on a weekly basis. At the end of the trial, the birds were slaughtered, carcass composition determined and meat samples taken for sensory evaluation. There was no interaction between level of L-leucine and ME on the sensory characteristics and carcass composition at 42 days. Dietary level of L-leucine and ME had no significant effect ($P>0.05$) on the live-weight, breast meat, lean, bone, fat and skin. Similarly, the flavour, tenderness, aroma, juiciness and overall acceptability scores of breast meat of broiler fed diets supplemented with leucine were also not significantly different. Further research is needed to evaluate the potential impact of excess leucine in diets with reduced levels of crude protein.

Keyword: Broiler, Carcass composition, Leucine, Metabolizable energy, Sensory