

The effects of dietary energy on the total sulphur amino acid requirements of broilers during two growth periods

ABSTRACT

Three levels of dietary ME (3,000, 3,200 and 3,400 kcal/kg) and four levels of Total Sulphur Amino Acid (TSAA) (0.73, 0.83, 0.93 and 1.03%) were studied in the starter period (0-3 wks) of the broilers. Three levels of dietary ME (3,000, 3,200 and 3,400 kcal/kg) combined with four levels of TSAA (0.65, 0.72, 0.79 and 0.86%) were studied in the grower period (3-6 wks). The crude protein content of the diet of the starter period was 23% while the diet of the grower period was 20%. The performance data of the starter broilers indicated that the dietary energy levels had no significant effects on body weight gain, feed intake and feed:gain ratio. However, TSAA levels had a significant influence on the growth and feed parameters. The response pattern for the grower period was similar to the starter period. The present experiment showed that in the tropics the TSAA requirement for the starter period was between 0.83 to 0.93% which is similar to the values recommended by NRC while for the grower period the TSAA requirement was between 0.79 to 0.86% at all the three energy levels which is higher than the values recommended by NRC.

Keyword: Dietary energy; Starter and grower broilers; Total sulphur amino acid