

## **Haematology and serum chemistry of finisher broiler chickens fed maize-cassava diet supplemented with methionine and inorganic sulphur**

\*Oguntoye, M.A., Idowu, O.M.O. Sogunle, O.M. Akintunde, A.R. Danladi, Y.

pp 152-162

### **Abstract**

This study was conducted to assess the haematology and serum chemistry of broiler chickens fed maize-cassava diets supplemented with methionine and inorganic sulphur. A total of 270 day-old broiler chicks were randomly assigned to nine treatment groups of 30 birds making 10 birds per replicate group. Starter and finisher diets were formulated and fed for a period of 56 days. Dietary treatments were subjected to Completely Randomized Design in a 3 × 3 factorial experimental layout. Birds were fed diets supplemented with 0, 125, 250 mg/kg DL-methionine and 0, 125, 250 mg/kg inorganic sulphur from CuSO<sub>4</sub>. Results of haematological parameters showed no significant ( $p>0.05$ ) difference among the treatment groups except the packed cell volume. The higher value of 31.33% was obtained for PCV in the birds fed diet supplemented with 0mg/kg DL-methionine + 125mg/kg CuSO<sub>4</sub>. Values recorded for biochemical indices varied significantly ( $p<0.05$ ) among dietary treatments for total protein, globulin and cholesterol. High significant ( $p<0.05$ ) values of 50.80 g/l and 29.85 g/l were obtained for total protein and globulin in the birds fed diet supplemented with 125 mg/kg DL-methionine + 250 mg/kg CuSO<sub>4</sub>. Lower ( $p<0.05$ ) value of 155.81mg/dl was recorded for cholesterol in birds fed diet supplemented with 250 mg/kg DL-methionine + 250 mg/kg inorganic sulphur. Based on the results obtained for haematological and serum chemistry parameters, it was concluded that supplementation of DL-methionine and inorganic sulphur in broiler diet at 125 mg/kg DL-methionine + 250 mg/kg inorganic sulphur level of supplementation improved dietary protein and had no inimical effect.

**Keywords:** Maize-cassava; DL-methionine; inorganic sulphur; haematology; serum chemistry

- Department of Animal Science, Taraba State University Jalingo
- Department of Animal Nutrition
- Department of Animal Production and Health, Federal University of Agriculture Abeokuta.

**Corresponding Author:** [ingenuityma@gmail.com](mailto:ingenuityma@gmail.com)

**Target audience:** Nutritionist; researchers; feed millers and poultry farmers