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“Development on the margin”

## Blood Profile of Broiler Finishers Fed Graded Levels of Indomie Noodle Waste Meal in Humid Tropics

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### Abstract

High cost of energy source animal feed ingredients specifically maize in the tropics has pushed animal nutritionists and livestock farmers into utilisation of cheaper alternatives without detrimental effect on the performances and physiological responses of these animals. Indomie Noodle is a popular fast food product well accepted by households in the tropics especially Nigeria. The factory wastes during the manufacturing process is usually enormous. It is being used in view of its high metabolisable energy, ether extract and crude protein contents to replace maize in the diets of broiler chickens both at starter and finisher phases with good results in terms of growth responses and cost implication. However, there is paucity of information on the physiological responses of these birds which can be assessed among other things by the blood profile to its incorporation.

One hundred and fifty unsexed Hypecco strain of broilers were randomly allotted into five isocaloric and isonitrogenous dietary groups with graded levels of Indomie Noodle Waste Meal at 0% (control), 25%, 50%, 75% and 100% to replace maize. Each group had thirty birds with three replicates in a completely randomised design. Dietary treatment started at the 5<sup>th</sup> week of age and lasted for five weeks while blood collection started at 5<sup>th</sup> shortly before the commencement of the treatment and weekly thereafter. Haematological parameters investigated were haemoglobin concentration (Hb), packed cell volume (PCV), white blood cell count (WBC), red blood cell count (RBC) while erythrocyte indices were calculated. Serum metabolites analysed for were total protein (TP), albumin, globulin, uric acid, calcium, glucose, creatinine, bilirubin and total cholesterol (TC). Data generated were subjected to statistical analysis of variance.

Hb, PCV and the erythrocyte indices were significantly ( $p < 0.05$ ) lowered by the IWM inclusion but not adversely while serum TP, albumin, globulin, calcium and TC were significantly ( $p < 0.05$ ) elevated with the level of IWM inclusion in the diet.

IWM can be used to replace maize in the diet of broiler finisher chickens the level of which must not exceed 50% to avoid high level of serum total cholesterol.

**Keywords:** Blood profile, broiler finisher, humid tropics, indomie noodle