Haematological and serum biochemical characteristics of four chicken genotypes in south-western Nigeria

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Abstract

A total of 180 chicks were used to compare the haematological and serum biochemical characteristics of four chicken genotypes from south-western part of Nigeria. The chicks were grouped based on their genotypes in a Completely Randomized Design for the eight-week study. The genotypes considered were Normal Feather (NF), Naked Neck (NN), Frizzled Feather (FF) and Marshal Broiler (MB) chickens at 45 chicks per genotypes. At the end of the experiment, ten birds per genotype were drawn and their blood samples analysed for haematological and serum biochemical studies. The results showed that there were no significant (P>0.05) variations in the haematological and serum biochemical characteristics of the four chicken genotypes except for aspartate aminotransferase (AST) and alkaline phosphatase (ALP) for which the Marshall Breed (41.25±1.89 µ/Ɩ) and Naked Neck (287.98±19.82 µ/Ɩ) respectively had the highest values. Based on the results obtained in this study, it can be concluded that the four chicken genotypes used in this study had little or no haematological and serum biochemical deviations. The result obtained in this study will be helpful in creating a baseline data on haemato-biochemical profiles of indigenous chicken breeds in Nigeria which in turn can be used for assessing the health status of these birds, improving desirable breeds/trait/strategies and designing appropriate breeding strategies for indigenous poultry birds in the country.

Key words: Haematology, serum characteristics, indigenous, chicken, genotypes