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Weight gain performance and some hematological parameters of broilers fed palm kernel cake-based diet supplemented with probiotic

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Abstract

The study investigated the combined and individual effects of probiotic (*Saccharomyces cerevisiae*) and a commercial enzyme (Zyme) on weight gain, hematology and serum biochemistry of broiler chicken. Eighty day–old broiler chicks were randomly divided into 4 groups (P1-P4) of 20 birds each. Each group was subdivided into 5 replicates of 4 birds each. P1 had no probiotic and no enzymes (control). P2 had enzymes in water (0.02ml/lit) but no probiotic. P3 had enzymes in their water (0.02ml/lit) and probiotic in their feed (0.8g/kg). P4 had probiotic in their feed (0.8g/kg) but no enzymes in their water. They were fed *ad libitum.* The quantity of feed consumed each day were determined. The birds were weighed weekly. At their 6^{th} week hematology and serum biochemistry were determined following standard procedures. The result showed that birds in group P4 had significantly ($P \leq 0.05$) higher final mean weight (2.51±0.05kg/bird) followed by P3 (2.43±0.05kg/bird) while P1 (the control) had the least final mean weight (2.31±0.02kg/bird). There was a significant difference ($P < 0.05$) in Eosinophil levels in P3 (probiotic and enzyme) and P4 (probiotic only). Serum cholesterol significantly ($P \leq 0.05$) decreased while total proteins were higher in probiotic treated groups (P3 and P4). P3 (probiotic + enzyme) gained less weight than P4 (Probiotic only) hence the combination of probiotic and enzyme was not recommended.

Biography

Ezema Chuka DVM, MSc. and Ph.D. in animal health and production from University of Nigeria, Nsukka. The title of my MSc. Dissertation was “Performance of broiler chicken fed low cost palm kernel cake-based diets supplemented with probiotic”, while that of my Ph.D. thesis was “Probiotic effects of *saccharomyces cerevisiae* on laying chicken fed palm kernel cake-based diets”. I was the Head of Department of Animal Health and Production, Faculty of Veterinary Medicine, University of Nigeria, Nsukka. I have published more than 20 papers on probiotic research in reputed journals. I have also presented papers on probiotic research findings in many international conferences.

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