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Probiotic effects of *Saccharomyces cerevisiae* on pullets fed palm kernel cake-based diets

Chuka Ezema
University of Nigeria, Nigeria

The study investigated the probiotic effects of *Saccharomyces cerevisiae* on pullets development and hen-day egg performance of the layers. A total of 120 chicks were brooded for 4 weeks, after which 100 pullets were randomly selected and placed in 4 groups (A-D) of 25 birds each. Each group was subdivided into 5 replicates of 5 birds in each replicate. Groups A, B and C had their feed supplemented with *S. cerevisiae* at graded levels of 0.6, 0.8 and 1.0 g/kg of feed respectively. Group D diet did not contain *S. cerevisiae* (control). The diets for all the groups contained 25% PKC and they were isocaloric and isonitrogenous. The pullets were weighed weekly. Probiotic supplemented groups recorded significantly ($p \leq 0.05$) higher weekly weight gain than the control up to the 10th week of age. Mean weight at 10th week were 0.866±0.033, 0.946±0.016, 0.914±0.041 and 0.856±0.013 kg/bird for groups A, B, C and D respectively. After the 10th week, there was no significant difference ($p > 0.05$) in weekly weight gain until point-of-lay. Group C had an overall significantly ($p < 0.05$) higher hen-day egg performance of followed by groups B and A, while group D had the least hen-day egg performance. Birds in the supplemented groups had significantly higher ($p < 0.05$) serum total proteins and significantly lower serum cholesterol compared to the control. Eggs from the supplemented groups had significantly ($p < 0.05$) lower cholesterol content compared to the control. Group C birds had a significantly ($p < 0.05$) longer colon than the control. There was no significant difference ($p > 0.05$) in egg qualities (egg size, egg weight and shell thickness) between the supplemented groups and the control. It was concluded that supplementation with probiotic *S. cerevisiae* significantly ($p < 0.05$) enhanced pullet development, hen-day egg performance and significantly ($p < 0.05$) lowered serum and egg cholesterol levels. The probiotic supplementation was most effective at the level of 1.0 g/kg of feed, and this level was recommended.

Biography

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

chukaezema97@yahoo.co.uk