EFFECT OF MULTI-ENZYME SUPPLEMENTATION ON PERFORMANCE OF COCKERELS

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Maintaining the quality of feed and reducing its cost have become the major challenge before the feed manufacturers in recent times due to the constant rise in cost and demand for feed ingredients. In this context, inclusion of locally available low cost feed ingredients in poultry ration is inevitable. Such unconventional (some cereals, cereal byproducts and vegetable proteins) raw materials could not be fully digested and utilized by the birds due to the presence of Non-Starch Polysaccharides (NSPs). In general, poultry lack sufficient quantity of microbial enzymes needed for breaking down the insoluble NSPs. With this background, an experiment was conducted to assess the effect of multi-enzyme supplementation on performance of cockerels. Four experimental cockerel (Layer chick) diets were formulated (as per BIS, 1992 recommendations) and one hundred and twenty Babcock male chicks belonging to a single hatch were weighed individually and randomly distributed to four treatment groups from 0 to 8 weeks of age with three replicates of ten chicks each. The treatment groups were, T1 (Control; BIS diet), T2 (BIS diet with addition of enzyme @ 500g/ton of feed), T3 (BIS diet with 5% reduction in metabolizable energy and crude protein with addition of enzyme @ 500g/ton of feed) and T4 (BIS diet with 10% reduction in metabolizable energy and crude protein with addition of enzyme @ 500g/ton of feed). The parameters such as weight gain, feed intake, feed efficiency, carcass traits and economics were studied. The means for weight gain of birds fed with diets T1, T2, T3 and T4 was found to be 592.73, 610.57, 584.83 and 534.33 g respectively. The weight gain differed significantly (P=0.01) among treatment groups. Similarly, highly significant (P=0.01) difference was observed in feed efficiency between treatment groups, as T2 recorded better feed efficiency (3.45) followed by T1 (3.59), T3 (3.65) and T4 (4.11). The mean carcass yield of the birds fed on diets T1, T2, T3 and T4 was found to be 65.37, 66.79, 66.51 and 66.39 per cent respectively. Though there was no significant difference, marginal increase in carcass yield and dressing percentage was observed in enzyme supplemented groups compared to control. The feed cost (Rs.)/kg weight gain in cockerels fed with diets T1, T2, T3 and T4 was 24.10, 22.40, 23.87 and 25.40 respectively. The enzyme supplementation reduced the feed cost/kg weight gain by 7.5 % in T2 and 1% in T3 from control group. In nutshell, multi-enzyme supplementation on top (T2) and reformulation (T3) resulted in improved utilization of nutrients in cockerels, which was evidenced from the improved weight gain, feed efficiency and reduction of feed cost/kg weight gain.

Key words: NSPs – Enzymes - Cockerels