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Effect of Multi-Enzyme Supplementation on Growth Performance of Broiler

Authors : Abdur Rahman, Saima, T. N. Pasha, Muhammad Younus, Yassar Abbas, Shahid Jaleel

Abstract : Non-starch polysaccharides (NSPs) are not completely digested by broiler endogenous enzymes and consequently the soluble NSPs in feed results in high digesta viscosity and poor retention of nutrients. Supplementation of NSPs digesting enzymes may release the nutrients from feed and reduce the anti-nutritional effects of NSP's. The present study was conducted to determine the effects of NSPs digesting enzymes (Zympex) in broiler chicks. A total of 120 day old broiler chicks (Hubbard) were categorized into 3 treatments and each treatment was having four replicates with 10 birds in each. Dietary treatments comprised of Basal diet (2740 KCal/Kg) as control-1 (T1), low energy diet (2630 KCal/kg) control-2 (T2) and low energy diet with 0.5 gm/Kg enzyme as T3. Multi-enzymes supplementation showed significant ($P < 0.05$) positive effect on weight gain (last three weeks), feed intake (last two weeks), FCR (1st, 2nd, 4th and 5th) and nutrient retention in T3 when compared with control-2. Weight gain was lower ($P < 0.05$) in low caloric feed group C when compared with control-1 in all weeks except last week ($P > 0.05$), feed consumption was significantly lower ($P < 0.05$) in 5th week and results showed significantly poor FCR ($P < 0.05$) in 2nd, 3rd and 4th week but non-significant effect in 1st and 5th week when compared with control-1 group, which revealed the positive effect of enzyme supplementation in low energy diet. These results revealed that enzyme supplementation releases more energy from low energy diets and results in equal performance to normal diet.

Keywords : body weight, FCR, feed intake, enzyme, non-starch polysaccharides
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