**EFFICACY OF FEED ENZYMES IN MAIZE-SOYA DEOILED RICE BRAN BASED DIETS ON PERFORMANCE AND IMMUNE-COMPETENCE OF KADAKNATH CHICKENS**

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**Abstract:**

Effect of certain feed enzymes in maize-soy-deoiled rice bran based diets on performance, immunity and feed economics in Kadaknath chickens was studied. A feeding trial with Kadaknath chicks, consisting 4 dietary treatments: Basal diets-Control(C); C+Phytase+Protease; C+Phytase; C+Protease was conducted having 50 birds/treatments following CRD design. The supplemented rates of feed enzymes were phytase @100 mg/kg of feed and protease @250 mg/kg of feed. Response criteria include weekly body weight, feed intake and FCR. Humoral immunity (antibody titer against 1% sheep RBC) was studied in ten birds/ treatment on 28d. At first week, body weight didn’t differ in control and other treatments but after second weeks it was significantly higher (P<0.01) in phytase+protease treated group up to marketing age. Phytase and protease enzyme has comparable effect in body weight when fed individually. Weight gain was higher in phytase+protease treated group than other treatments. Feed intake in different treatments didn’t differ, though it was higher in phytase and protease individually fed groups. No significant difference in FCR in different treatments though it was better in phytase+protease treated groups. Humoral immune response was significantly higher in phytase+protease treated group compare to control and other treatments. Feed cost/kg body weight was not differs due to dietary treatments. However, numerically less feed cost/kg body weight was observed in phytase+protease treated group than control. It was concluded that supplementation of phytase+protease in the diet of kadaknath was beneficial for improved growth performance, immunity and for reduction of feed cost.

**Keywords:** Feed enzymes, Kadaknath, performance, immune-competence.