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## Supplementation of maize-soybean-meat cum bone meal based broiler diets with different levels of proteases

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An experiment was conducted to evaluate the effective combinations of proteases (acid, neutral and alkaline) and their concentrations on performance and carcass traits in commercial broilers fed on diets containing sub-optimal protein levels. A total of 320 broilers were used in completely randomized design with eight treatments and eight replicates in each treatment. Maize-soybean meal based control diets (CD) were formulated to contain 23, 21 and 19.5% crude protein (CP), maize-soybean-meat cum bone meal based diets (BD) with sub optimal CP were formulated with 19.5, 18 and 17.5% CP respectively during pre-starter (1-11 days), starter (12-28 days) and finisher (29-42 days) phases and fed ad libitum from 1 day to 42 days of age. The low protein BD were supplemented with two different combinations of proteases (1:1:1 and 2:1:1 acidic, neutral and alkaline proteases, respectively) with total activity of 2000, 4000 and 6000 u/kg. The results showed that the broilers fed CD had significantly higher body weight gain compared to those fed BD. Supplementation of proteases to the BD significantly ( $P < 0.005$ ) improved the body weight gain and feed efficiency during 1-21 and 1-28 days of age but not during the latter phase (35 and 42 days of age) of growth. The broilers fed on CD had significantly ( $P < 0.005$ ) higher ready to cook and breast yields compared to those fed the BD or BD with protease supplementation. The relative weight of abdominal fat was significantly ( $P < 0.005$ ) reduced in broilers fed with 1:1:1 (acidic, neutral and alkaline proteases) at 4000 u protease/kg diet as compared to BD. In conclusion, it is suggested that addition of proteases to low protein diets had a significant positive effect in young chicken fed on maize-soybean meal based-meat and bone meal based diets.

### Biography

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