EFFECT OF DIETARY PROTEIN ON HATCH WEIGHT IN BREEDER JAPANESE QUAIL (COTURNIX COTURNIX JAPONICA)

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Hatch weight is first economic trait in the production performance of a meat or egg type bird. An experiment with 800 day old quail chicks was conducted under cage system of management to study the effect of dietary protein during various stages of breeders on hatch weight. A dietary protein of 22, 24; 18, 20 and 17, 19 and 21 per cent were offered during brooding, growing and breeding periods.
with the isocalorific diets (2750, 2600 and 2700 kcal ME per kg feed) in respective periods. The highest hatch weight of 8.40 ± 0.05 g was recorded in 24/20/21 dietary protein group and observed that dietary protein groups that received 21 per cent dietary protein during breeding period recorded significantly (P<0.01) the highest mean hatch weight of 8.36 ± 0.01 g followed by 19 per cent dietary protein (8.26 ± 0.02 g) and 17 per cent dietary protein (8.20 ± 0.01 g) which revealed that as the dietary protein in breeder diet increased, the hatch weight also was found to increase. Irrespective of the protein levels, as the age advanced, there was significant (P<0.01) increase in hatch weight except at 15-18 weeks of age, which recorded the lowest hatch weight. It may attributed due to the high rate of lay of quail during 12-16 weeks of age which may not be compensated with proportionate feed intake resulted in subsequent loss of body weight and tangible reduction in egg weight and hatch weight. Based on this study it is concluded that dietary protein levels during breeding period alone influencing the hatch weight and increasing levels of protein had positive correlation with increasing hatch weight. It also revealed that as the age advanced there was increase in the hatch weigh except during the end of high rate of lay periods of 12-16 weeks of age.