

## EFFECT OF A FORMULATED RATION ON THE GROWTH, EGG PRODUCTION AND MEAT QUALITY OF JAPANESE QUAIL

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Japanese quail (*Coturnix coturnix japonica*), a non-popular poultry bird, is a cheap source of meat and eggs. Since there is no formulated feed available for commercial quail farming in Sri Lanka, quails have been reared using either layer or broiler commercial feeds. Thus, a research was developed to evaluate a formulated ration on quails (T1) compared to the commercial layer grower ration (C) in which the crude protein content was adjusted to 20% when used as the starter ration. Each treatment had 16 birds assigned into two replicates. Quails aged 10 days were introduced to the treatments. Quails were reared under an intensive system. Data were collected on weekly live body weight, daily egg production, daily feed intake, and carcass weight. Feed conversion ratio (FCR) and live weight gain were calculated. Crude protein content of C and T1 starter rations were  $26.10 \pm 0.05\%$  and  $23.55 \pm 0.05\%$ , respectively, and C and T1 finisher rations were  $17.52 \pm 0.06\%$  and  $17.31 \pm 0.06\%$ , respectively. The results showed that mean body weight, daily feed intake, live weight gain, and egg production per bird were not significantly different between C and T1. However, carcass weight was significantly higher ( $p < 0.05$ ) in C ( $100.07 \pm 2.67$  g) than that in T1 ( $90.78 \pm 3.26$  g). Similarly, breast weight was also higher ( $p < 0.05$ ) in C ( $34.49 \pm 0.99$  g) than that in T1 ( $29.83 \pm 1.22$  g). Feed conversion ratio of C and T1 was 3.86 and 3.64, respectively. Cost of production of one kg of starter in C and T1 was LKR 321.50 and 186.00, respectively and finisher in C and T1 was LKR 250.00 and 154.00, respectively. Hence, considering the FCR and cost of production the formulated starter and finisher rations (T1) can be recommended for quail farmers in Sri Lanka as the performances of quails did not vary except for carcass and breast weights when fed with formulated rations compared to the commercial ration.

**Keywords:** Feed conversion ratio, Feed intake, Meat quality, Starter and finisher rations