



A COMPARATIVE STUDY ON CARCASS YIELD IN MALE AND FEMALE JAPANESE QUAIL (*COTURNIX COTURNIX JAPONICA*)

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Abstract

Japanese quail (*Coturnix coturnix japonica*) is the smallest avian species reared for meat and egg. Rearing of quails provides livelihood to farming community. A batch consisting of 263 quails were reared for this study. At 28 days of age, 10 male and 10 female quails were randomly selected and weighed to know the live weight. After slaughter and evisceration the carcass yield was recorded and dressing percentage was calculated in male and female separately. The average live weight of male was 177.9 g and female was 192.8 g. The carcass weight in male and female was 126.7g and 145.6g, respectively. The dressing percentage obtained was 71.21% in male and 75.51% in female. There was a significant difference ($p < 0.01$) among female and male birds in live weight, carcass yield and dressing percentage.

Key words: Japanese quail, live weight, carcass yield, dressing percentage, *coturnix*

Introduction

Quail rearing is a lucrative enterprise that provides livelihood and fulfill the financial need of farmers. In India the brown coloured Japanese quail (*Coturnix coturnix japonica*) is commonly reared for meat and egg. The major advantage of quail rearing is that it requires minimum space, less capital investment, shorter generation interval, early sexual maturity, more disease resistance, better feed efficiency and faster growth rate (Vali, 2008). The average weight of Japanese quail is 250g and lays 250 eggs per annum. It is the smallest avian species reared for egg and meat purpose. Quail meat possess low calorie with high protein content. The average dressed carcass yield is 65-70%. A daily intake of two quails would provide 27-28g of protein and 11g of essential amino acids to human body (Nasr *et al.*, 2017).

Materials and Methods

The study was conducted at Division of Animal Husbandry, Annamalai University in March 2018. Total number of birds reared for this study was 263. It includes both male and female birds. Birds were fed with commercial feed containing 24% crude protein and energy

of 2800 Kcal/kg of feed. Both feed and water were given *ad libitum*. Sexing was done based on the difference in color of the breast feathers as per the standard methods (Homma *et al.*, 1966). At 28 days of age, 10 male and 10 female birds were randomly selected, after 6 hrs of feed withdrawal they are weighed individually using digital balance to know the live weight of each bird. Then birds were slaughtered, eviscerated manually and the hot carcass weight of each bird was recorded to calculate the dressing percentage. The data was analysed by students 't' test using SPSS software.

Results and Discussion

The average live weight of male and female Japanese quail was 177.9g and 192.8g, respectively. The carcass weight was 145.6g in female quail and 126.7g in male quail. The dressing percentage observed in this study was 75.51% in female and 71.21% in male quails.

The average live weight of female (192.8g) was significantly ($p < 0.01$) higher than male (177.9g) quails. The higher average live weight in female was also reported in earlier studies (Bonos *et al.*, 2010; Alamuoye and Ojo, 2015). In another study, Karthika and Chandirasekaran (2016) reported that there was an increase in pre slaughter weight with increase in age of birds. This implies that in

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Table 1: Live weight(g) of male and female quail.

Sex	Mean±SEM	SD
Male (n=10)	177.9±0.94 ^a	2.84
Female(n=10)	192.8±1.09 ^b	3.28

Means bearing different superscripts indicates significant difference (p< 0.01)

Table 2: Carcass weight (g) and dressing percentage of male and female quail.

Sex	Mean±SEM	SD	Dressing %
Male (n=10)	126.7±0.86 ^a	2.60	71.21
Female (n=10)	145.6±0.88 ^b	2.65	75.51

Means bearing different superscripts indicates significant difference (p< 0.01)

case of Japanese quails the body weight of female is more than male birds.

The carcass weight was higher in female quail (145.6g) than male quail (126.7g). There was a significant difference (p < 0.01) in carcass weight between female and male quails in this study. The higher carcass weight in female bird observed in this study is similar to the reports of earlier work (Sandip, 2010). Ayasan *et al.*, (2000) observed differences in carcass weight in male and female quails. Minvielle *et al.*, (2000) reported a marginally higher carcass weight in female quails. Studies involving 6th week namakkal quail⁻¹ showed higher carcass weight and among female and male birds the female quails yielded higher carcass weight than male (Karthika and Chandirasekaran, 2016). Research work on sex and age of bird has a significant effect on the carcass yield and birds slaughtered at 5 to 6 weeks resulted in better carcass yield (Walita *et al.*, 2017).

The dressing percentage observed in this study was 75.51% in female and 71.21% in male quails. The dressing percentage was higher in female than male quails and it is similar to the earlier reports (Alamuoye and Ojo, 2015). The edible meat from quail is more compared to other animals as the dressing percentage is more than 70% in both sexes.

Conclusion

In case of Japanese quails the live weight, hot carcass weight and dressing percentage is more in female bird compared to male bird at 4 weeks of age. Both live, dressed weight and its percentage may vary between

male and female birds if slaughtered after 4th week of age. Future studies on individual weight of various carcass parts and its difference among male and female quail at different weeks of age is needed.

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