J.Meat Sci., 2012, 8(1&2) : 80 - 82 Research Note

Carcass And Meat Characteristics Of Quail Reared Under Intensive System In Kashmir

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ABSTRACT

A study was conducted to assess the carcass and meat characteristics of Japanese quail reared under intensive system in temperate climatic conditions of Kashmir valley. After recording the average live weights (188.98±0.36 gms), birds were slaughtered by halal method. The mean±S.E bled-out, defeathered and dressed weights (gms) were recorded as 180.7±0.35, 171.2±0.35 and 139.05±0.33, respectively. The dressing percentage was recorded as 73.87±0.20. The percent yield of inedible offals; viz: blood, feathers, head and shanks was 4.39±0.08, 5.06±0.10, 4.99±0.07 and 2.30±0.05, respectively on live weight basis. The total giblets percent on live and dressed weight basis were 4.99±0.07 and 2.30±0.05, respectively. The moisture, crude protein, ether extract and ash were found as 74.14±0.63 (%), 20.22±0.79 (%), 4.11±0.52 (%) and 2.45±0.18 (%). Although quail meat is less common in Kashmir and considered a delicacy but the carcass and meat quality revealed its potential as a supplementary source of meat.

Key Words: *Carcass, intensive system of rearing, quail.*

Quail locally known as *"Bater"*, small type of bird was recognized as an important laboratory animal because of its small body size, early sexual maturity and ability to produce several generations in a year (Anthony et al., 1996). The use of quail as meat animal is increasing in many countries like France, Italy, Spain and Greece (Dhaliwal et al., 2004). However, in India, the consumption of quail meat is not common but is rated as a culinary delicacy. Quail meat in addition to being rich in protein, minerals, vitamins and low in fat is also considered by some as therapeutics for anemia, diabetes, asthma, tuberculosis, sexual and nervous disorders. Since quail farming did not exist in Kashmir, the first attempt was made by the SKUAST-K to increase meat production and enhance livelihood security. In this context, the present study was conducted with the objective of assessing the carcass and meat characteristics of quail reared under intensive system in temperate climatic conditions of Valley.

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For the study, 200 market ready quail birds (5-6 weeks) were procured from the University farm. After recording their individual live weights, the birds were slaughtered by halal method and allowed to bleed completely. The weight of blood and feathers were recorded by weighing the birds after bleeding and defeathering. The birds were eviscerated and the weight of carcass, heart, liver, gizzard, head and shanks were taken on a electronic balance and recorded. The data obtained from the study was processed to calculate dressing percentage as well as the percentage of byproducts on both live and dressed weight basis. The moisture, crude protein, ether extract and ash were analyzed by AOAC, 1995. The values obtained were then analyzed statistically to obtain Mean ± S.E. values.

The results pertaining to various carcass and yield characteristics of quails reared in Kashmir are presented in Table 1 and 2. The average pre-slaughter live weight, bled-out, defeathered and dressed weight were found to be 188.98 (gms), 180.70 (gms), 171.19 (gms) and 139.05 (gms),

Table 1: Carcass characteristics proximate composition of six week old Japanese quail reared under intensive system in Kashmir

Parameter	Mean±S.E.
Pre-slaughter weight (gms)	188.98 ±0.36
Bled out weight (gms)	180.70±0.35
Defeathered weight (gms)	171.19±0.35
Dressed weight (gms)	139.05±033
Dressing percentage	73.87±0.20
Moisture (%)	74.17±0.63
Crude protein (%)	20.22±0.79
Ether extract (%)	4.11±0.52
Ash (%)	2.45±0.18

respectively. Pre-slaughter weight was slightly lower than that reported by Dhaliwal *et al.*, 2004 who reported live weight of 6 week Japanese quail as 192.6 ±4.4 (gms). The Dressing percentage of 73.87±0.20 found in the present study was in agreement with that of Dhaliwal *et al.* (2004) who reported dressing percentage of 6 week old quail as 73.65± 0.4 %. The dressing percentage of 65.95±1.25 reported by Wani *et al.* (2005) in broilers reared under similar temperate climatic conditions of Kashmir reflects that the quail birds although small in size than broilers have more dressing percentage by about 10%.

lower than the corresponding values of 3.81±0.09%, 1.27±0.04% and 3.08±0.09%, respectively reported by Dahliwal *et al.* 2004 in 6 week old quails. The yield of head, an inedible byproduct was higher i.e. 4.99±0.07 (%) than broilers reared under similar climatic conditions when it was only 3.22±0.13 (%) as reported by Wani *et al.* (2005). However, other major inedible offal i.e. shanks showed lower yield of 2.30 ±0.05 (%), than broilers (4.82 ±0.19 %).

The proximate composition of quail meat is presented in Table 3. The percent moisture, protein, fat and ash content of Japanese quail were observed to be 74.17±0.63, 20.22±0.79, 4.11± 0.52 and 2.45±0.18, respectively which is in agreement with the values reported by Dawson *et al.* (1971), and Panda and Srivastava, (1987).

Although the quail meat is less common in Kashmir and considered as delicacy, it can be used as supportive source of meat since the carcass, yield and meat characteristics are appreciable and even better than broilers reared under same conditions when considering the percentages of inedible and edible portions especially dressing percentage which was found remarkably high by

Table 2: Yield characteristics of giblets and other main byproducts of quails reared under intensive system

Byproduct/Organ	Weight (gms)	Yield on liveweight basis (%)	Yield on dressed weight basis (%)
Gizzard	3.79±0.07	2.0 ±0.05	2.76±0.06
Heart	1.53±0.04	0.82±0.03	1.12±0.33
Liver	3.92±0.07	2.0 ±0.05	2.84±0.06
Total Giblets	9.24±0.10	4.90±0.06	6.72±0.08
Blood	8.28±0.11	4.39±0.08	6.04±1.87
Feathers	9.5 ±0.14	5.06±0.10	6.99±0.13
Head	9.32±0.09	4.99±0.07	6.83±0.09
Shanks	4.29±0.06	2.30±0.05	3.14±0.06

The blood and feather losses in present study were 4.39% and 5.06% which were also lower than in broilers as reported as by Wani *et al.* (2005) i.e. 4.68 % and 6.12% respectively. The mean±S.E. percent yield of gizzard, heart, liver in present study were 2.0±0.05%, 0.82 ±0.03% and 2.0 ±0.05% on live weight basis. These results were about 10%. Moreover, the nutritive value of quail meat was also found comparable to those reported in the literature from elsewhere in the country.

REFERENCES

AOAC (1995) Official Methods of Analysis. 16th Edition. Association of Analytical Chemists, Washington DC.

Anthony NB, Nestor KE and Marks, HL (1996) Short-term selection for four-week body weight in Japanese quail. Poul. Sci. **75**: 1192-97.

Dawson IE, York LR, Amon N, Kulenkamp C, Coleman TH (1971) Composition and acceptability of meat from Bob White quail. Poul. Sci. **50**: 1805-1810.

Dhaliwal SK, Chaudhary ML, Brah GS and Sandhu JS (2004) Growth and carcass characteristics of selected and control lines of Japanese quails. Indian J. Poul. Sci. **39**(2): 112-119.

Panda and Srivastava (1987) All about Quail Farming**.** VET Helpline India team, in consultation with Dr. Ajit S. Ranade and Dr. Deepasheen N. Desai. Department of Poultry Science, Bombay Veterinary College, Parel, Mumbai. [http// www. Vethelplineindia.com]. Accessed December 20, 2009.

Wani SA, Salahuddin M, Bhat GA, Malik AH and Pal MA (2005) Carcass and Meat Characteristics of Broilers in Kashmir. SKUAST Journal Research. **7:** 23-28.

NEWS

Dr. V. Kesava Rao the founder President of IMSA and Editor, Journal of Meat Science has retired on superannuation on 30th June, 2012 as Professor & Head, Department of Livestock Products Technology, Rajiv Gandhi College of Veterinary and Animal Sciences, Pondicherry. He has been instrumental in establishing a model Dept. of LPT here and reviving the erstwhile "Indian Association of Meat Scientists and Technologists" and publishing the Journal. He is settled in Hyderabad. We wish him peaceful and healthy retired life.