STUDY ON MEAT CHARACTERISTICS OF DORSET AND NILAGIRI CROSS-BRED SHEEP

V. Chandirasekaran, R. Narendra Babu, R. Anilkumar, P.C. Sakthivel and M. Iyue
Department of Meat Science and Technology,
Veterinary College and Research Institute, Namakkal - 637 002, Tamil Nadu
email: v.chandirasekaran@gmail.com

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A study was carried out with Dorset × Nilagiri cross-bred sheep to assess the carcass yield and mutton quality. The results have shown that at the age of nine months, the mean live weight, hot carcass weight and dressing percentage recorded were 23.00 ± 0.58, 7.82 ± 0.12 and 34 per cent, respectively in males and 20.17 ± 1.17, 7.71 ± 0.43 and 38.24 per cent, respectively in females with the total average of 21.58 ± 0.86, 7.77 ± 0.20 and 35.98 per cent, respectively. The mean weight of neck, shoulder, breast and fore shank, rack, loin, legs and meat-bone ratio were 0.60 ± 0.04, 1.32 ± 0.14, 1.65 ± 0.16, 0.55 ± 0.22, 0.85 ± 0.04, 2.73 ± 0.09 and 1.74 per cent, respectively in males and 0.60 ± 0.11, 1.20 ± 0.04, 1.65 ± 0.10, 0.58 ± 0.05, 0.85 ± 0.03, 2.77 ± 0.17 and 1.84 per cent, respectively in females with the total average of 0.60 ± 0.05, 1.26 ± 0.07, 1.65 ± 0.09, 0.56 ± 0.02, 0.85 ± 0.02, 2.75 ± 0.09 and 1.79 per cent, respectively. The proximate analysis (percentage) of meat of nine months old Dorset × Nilagiri breed of sheep showed that moisture, protein, ether extract (fat), total ash and gross energy were 73.57 ± 0.71, 23.16 ± 0.35, 1.64 ± 0.41, 0.93 ± 0.05 and 1491.33 ± 53.60 K.cal/kg respectively in males, whereas 74.04 ± 0.54, 21.27 ± 0.71, 2.21 ± 0.22, 1.19 ± 0.04 and 1462.66 ± 36.71 K.cal/kg respectively in females, with the total average of 73.80 ± 0.28, 22.21 ± 0.30, 1.92 ± 0.15, 1.06 ± 0.03 and 1477 ± 20.71, respectively.

MATERIALS AND METHODS

Six male and six female of Dorset × Nilagiri cross-bred sheep were selected at nine months of age for carcass yield and mutton quality evaluation in the present study. The animals were slaughtered by humane method i.e. by performing electrical stunning prior to bleeding. The carcass traits were studied at Sheep Breeding Research Station, Ooty and the meat samples for proximate analysis were taken to the Department of Meat Science and Technology, Veterinary College and Research Institute, Namakkal for further analysis. The carcass traits studied were live weight, hot carcass weight, dressing percentage, neck weight, shoulder weight, breast and fore shank weight, weights of rack, loin & legs and meat-bone ratio. The proximate analysis was done for moisture, protein, ether extract (fat), total ash and gross energy. The data were analyzed using standard formulae.

RESULTS AND DISCUSSION

The important carcass parameters were included in the present study to analyze the meat producing ability of Dorset × Nilagiri breed of sheep. At the age of nine months, the mean live weight, hot carcass weight and dressing percentage recorded were 23.00 ± 0.58, 7.82 ± 0.12 and 34 per cent, respectively in males and 20.17 ± 1.17, 7.71 ± 0.43 and 38.24 per cent, respectively in females with the total average of 21.58 ± 0.86, 7.77 ± 0.20 and 35.98 per cent, respectively. These parameters were significantly higher in comparison with the earlier reports of Kenguri breed of sheep where the average slaughter and the carcass weight were 20.78 ± 0.84 and 9.30 ± 0.39, respectively, which were slaughtered at the age of 12 months.
The mean weight of neck, shoulder, breast and fore shank, rack, loin, legs and meat-bone ratio were 0.60 ± 0.04, 1.32 ± 0.14, 1.65 ± 0.16, 0.55 ± 0.22, 0.85 ± 0.04, 2.73 ± 0.09 and 1.74 per cent, respectively in males and 0.60 ± 0.11, 1.20 ± 0.04, 1.65 ± 0.10, 0.58 ± 0.05, 0.85 ± 0.03, 2.77 ± 0.17 and 1.84 per cent, respectively in females with the total average of 0.60 ± 0.05, 1.26 ± 0.07, 1.65 ± 0.09, 0.56 ± 0.02, 0.85 ± 0.02, 2.75 ± 0.09 and 1.79 per cent, respectively.

The proximate analysis (percentage) of meat of nine months old Dorset × Nilagiri breed of sheep showed that moisture, protein, ether extract (fat), total ash and gross energy were 73.57 ± 0.71, 23.16 ± 0.35, 1.64 ± 0.41, 0.93 ± 0.05 and 1491.33 ± 53.60 K.cal/kg. respectively in males, whereas 74.04 ± 0.54, 21.27 ± 0.71, 2.21 ± 0.22, 1.19 ± 0.04 and 1462.66 ± 36.71 K.cal./kg. respectively in females, with the total average of 73.80 ± 0.28, 22.21 ± 0.30, 1.92 ± 0.15, 1.06 ± 0.03 and 1477 ± 20.71, respectively. The higher value in protein and lower value in ether extract and total ash were recorded in comparison with earlier reports in Malpura lambs² and Kenguri breed of sheep³.

REFERENCES