

A Study of Body Weight and Type Traits Recorded on Hairy Goat in Punjab, Pakistan

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Abstract : The objectives of the study were to determine phenotypic variations in Hairy goats for quantitative and qualitative traits and to analyze the relationship between different body measurements and body weight in Hairy goats. Data were collected from the Barani Livestock Production Research Institute (BLPRI) at Kherimurat, Attock and potential farmers who were raising hairy goats in the Potohar region. Twelve (12) phenotypic parameters were measured on 99 adult Hairy goat (18 male and 81 female). Four qualitative and 8 quantitative traits were investigated. Qualitative traits were visually observed and expressed as percentages. Descriptive analysis was done on quantitative variables. All hairy goats had predominately black body coat color (72%), whereas white (11%) and brown (11%) body coat color were also observed. Both the pigmented (45.5%) and non-pigmented (54.5%) type of body skin were observed in the goat breed. Horns were present in the majority (91%) of animals. Most of the animals (83%) had straight facial head profiles. Analysis was performed in SAS On-Demand for Academics using PROC mixed model procedure. Overall means \pm SD of body weight (BW), body length (BL), height at wither (HAW), ear length (EL), head length (HL), heart girth (HG), tail length (TL) and MC (muzzle circumference) were 41.44 ± 12.21 kg, 66.40 ± 7.87 cm, 75.17 ± 7.83 cm, 22.99 ± 6.75 cm, 15.07 ± 3.44 cm, 76.54 ± 8.80 cm, 18.28 ± 4.18 cm, and 26.24 ± 5.192 cm, respectively. Sex had a significant effect on BL and HG ($P < 0.05$), whereas BW, HAW, EL, HL, TL, and MC were not significantly affected ($P > 0.05$). The herd had a significant effect on BW, BL, HAW, HL, HG, and TL ($P < 0.05$) except EL and MC ($P > 0.05$). Hairy goats appear to have the potential for selection as mutton breeds in the Potohar region of Punjab. The findings of the present study would help in the characterization and conservation of hairy goats using genetic and genomic tools in the future.

Keywords : body weight, Hairy goat, type traits Punjab, Pakistan

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