

Comparative Study on Morphological and Morphometric Features of Village Chicken in Sri Lanka

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ABSTRACT: A study was conducted in two selected sites (Anuradhapura and Puttlam districts) to phenotypically characterize various types of village chicken present in Sri Lanka. Qualitative traits such as characteristics of plumage, comb, shank, eye and earlobe, and body condition score were recorded with a full inventory of management conditions. Quantitative traits included body weight and linear morphometric measurements such as chest circumference, wing length, back length, breast width, keel length, pelvis width, shank length and shank circumference. Seven distinct phenotypic groups could be identified as naked neck (NNC), long legged (LLC), crest/crown (CC), Giri raj (GRC), commercial crosses (ComC), frizzle feathered (FFC) and non-descript (NVC). NVC group included multiple crosses of other groups. Occurrence of different morphological features varied significantly ($p < 0.05$) between study sites, sexes and among phenotypic groups as shown by chi square analysis. Analysis of variance procedure followed by Duncan's new Multiple Range test showed significant differences in linear measurements and body weight among groups, where GRC (exotic genotype of Indian origin) reporting to be the largest and FFC the smallest ($p < 0.05$). Regression analysis performed showed significant relationships of body weight with every linear trait while chest circumference and shank length were the best predictors of live weight. The performance gap between village chicken and exotic breeds showed the potential for village chicken to be developed and sustainably utilized.

Keywords: Characterisation, morphometric traits, phenotypic diversity, Sri Lanka, village chicken

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