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"Solidarity in a competing world — fair use of resources"

Phenotypic Characterisation, Performances and Husbandry Conditions of Local Poultry in (Peri-)Urban Households in Tamale, Ghana

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Abstract

The socio-economic importance of urban agriculture continues to rise in Southern countries, due to rapid population growth, rising incomes and urbanisation. Increasing demand for poultry products has led to the growing use of high-performing exotic breeds in poultry production systems worldwide. However, traditional production systems in which local breeds are kept are still relevant in many tropical countries. The frequent mixing of exotic and local birds in such systems raises concerns about genetic losses in local poultry breeds with the number of breeds at risk increasing rapidly. Identifying distinct breed populations through phenotypic characterisation is an important step to provide information for the conservation of animal genetic resources.

Phenotypic traits of adult local chickens (788) and Guinea fowls (394) were assessed and production environments examined in 78 (peri-)urban households in Tamale, Northern Ghana, in 2015. Socio-economic characteristics and preferences for local poultry were also assessed. Reported yearly egg production was 30–50 eggs for chickens and >100 eggs for Guinea fowls. Mean body weights were 0.90±0.19 kg for chickens and 1.19±0.19 kg for Guinea fowls. In both chickens and Guinea fowls, results show different plumage, skin, eye, comb/helmet and earlobe and shank colours. Local breeds are preferred due to their ease of management, adaptability/disease resistance and traditional/religious uses. Households raise chickens and Guinea fowls for home consumption and income. Birds are kept under extensive conditions without the support of technical services. Diseases and poor management are the main challenges of production.

Phenotypic variation of the mentioned qualitative traits points to a genetic diversity, also of quantitative and secondary traits that may be worth conserving for future use. This provides opportunity for selection and improvement of local poultry populations. Utilizing the latter is the best route to their genetic conservation. Therefore production of local breeds of poultry should be given policy and research attention in Ghana.

Keywords: Breeds, conservation, genetic resources, Guinea fowls, traits

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