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## Phenotypic Characteristics of Four Indigenous Chicken Breeds in Cambodia

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### Abstract

Domestic poultry diversity is an important part of food resource, especially among rural farmers in Cambodia. However, the pressure on its production system is increasing rapidly. Chicken diversity can be exploited by characterising its performance and farmer acceptance. This paper aimed to describe the phenotypic characteristics of four major indigenous chicken breeds in Cambodia. Surveys were carried out during 2003–2004 as fact finding study to investigate the major breed candidates. Seven candidates were recorded from 150 sampled households, however, only 4 breeds were frequently observed. Sampov (Local bantam: A), accounted for 55 % of total population, whereas Kandong (Slow feathering: B), Skoeuy (Bicolour: C), and Kragnas (Frizzle: D) represented 10, 7, and 5 % respectively. Except A which was found thoroughly, each breed had regional-specific location. Secondly, an on-station experiment to determine the growth performance of these four breeds was conducted with seven week old chickens for 12 weeks. The average daily gain (g/day) of A (15.74) and B (15.31) were significantly higher than C (13.35) and higher than D (12.05). Breeds showed differences in their feather feature, colour, and length. Male A showed a bright colourful red and black feather whereas barbules colour was typical in C. Male B had less dorsal and body feather than any other breeds. The dominant colour in D was pale black and their contour feathers are curved outward. The comparative percentage of feather of A was 8.92 significantly higher than C (5.70) and C (4.78) and higher than B (3.83) resulted in differences in percentage of plucked and dressed weights. Phenotypic characteristic of these breeds is concreted information while available documentation is still limited. Ranking the economical value of these breeds is not necessary while farmers have different acceptant criteria. It is required more investigation on on-farm performance of these breeds and their tolerance to epidemic disease. The most rational and sustainable way to conserve these resources to combat threat to rural food security is to ensure that indigenous breeds remain functional parts of production systems.

**Keywords:** Genetic diversity, indigenous chicken, promising economic breed