



Morphological Diversity Assessment of Local African Pigs in Central and Northern Benin

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ABSTRACT

This study aims to assess the phenotypic diversity of local pigs raised in Central and Northern Benin. For this purpose, 242 local pigs were sampled in Central (districts of Dassa-Zoumé, Glazoué and Savè) and Northern (districts of Tanguiéta, Matéri and Coby) Benin using morphological (sex, hair color, hair distribution, ear position and shape) and morphometric (height at withers, height at sacrum, chest girth, ear length, hair length, head length, neck circumference, snout length, snout circumference, hip width, back width, body length, tail length, hair length and body weight) descriptors. Data were analyzed using R. Software version 4.2.3. The results showed that hair color was very diverse, with white (35.12%) and black (29.34%) predominating. The majority of pigs had erect ears (80.70% in the center and 100% in the north), and very densely distributed hair. Pigs from North were significantly more developed than those from Center considering parameters such as body weight (53.92 kg vs. 45.86 kg), chest girth (91.46 cm vs. 76.39 cm), heights at sacrum (61.43 cm vs. 54.46 cm) and at withers (58.15 cm vs. 51.03 cm). Moreover, considering the genetic factors such as body's hair distribution and animal's sex, the pigs with dense hairs and the boars had the best morphological sizes. Analysis of the pigs' morphological structure revealed three different groups along the size gradient, with big and medium-sized mostly from northern Benin. Further investigations of the genetic diversity using molecular tools is required to better appreciate the phenotypic variability observed in the present study.

Keywords: Local African pig, Genetic diversity, Morphotypes, Benin