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Variability in some morphological traits of indigenous Nigerian and Sudanese goat breeds

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A total of 360 male and female goats were sampled for morphological traits assessment to distinguish the populations from Nigeria and Sudan. Three breeds from Nigerian goat population (West African Dwarf (WAD), Red sokoto and sahelian breeds) and two Sudanese goat population (Local and Desert breeds) were considered for the study . Nine quantitative traits were used, the include, body weight, height at wither, body length, face length, heart girth, neck length, ear length , rump length and tail length. The Sudanese desert goat are heavier 28.57 ± 1.38 , longer body 58.75 ± 0.61 , better heart girth 69.36 ± 1.26 , longer neck, ears, rump and tail 23.23 ± 1.26 , 22.65 ± 0.38 , 14.76 ± 0.26 , 14.38 ± 0.20 respectively while the Nigerian red sokoto had longer face 20.13 ± 0.39 . The Mahalanobis distance of the morphological traits between the Sudanese and Nigerian indigenous goats showed that the Sudanese local and the desert breeds are the closest 1.27. while the highest distance was among the Nigerian goat population red sokoto and the sahelian 68.79. The result of classification into appropriate group clearly show Nigerian goats all classified as 100 percent with the Sudanese breed sharing their classification across breed. The information generated from this study on the morphology of the goats will provide an insight to the genetic details of the goat populations in the two countries , thus will be valuable information for the genetic characterization of the goat populations from the two countries.

Keywords: desert, local, morphology, sahelian, west africa dwarf