

Characterization of Young Donkeys in North West Nigeria using Morphometric Traits

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Abstract

Morphometric traits were used to determine the relationship among Red (Auraki), Black (Duni), White (Fari), Brown (Idabari) and Brown-white (Idabari-fari) for young donkeys. A total of 210 young donkeys were used for the study. Morphometric measures taken were head length, head width, ear length, neck length, neck circumference, shoulder width, height at withers, heart girth, body length and tail length. Data obtained were subjected to statistical analysis to determine the distribution of phenotypic traits across classes based on morphometric traits. The effect of strain, sex, location and interaction on certain linear body measurements were estimated using the GLM procedure of the statistics analysis software SAS statistical package. There were variations in the morphometric traits of the donkeys due to strain, sex and location effects with white donkeys exhibited the heaviest body weight (126.78kg) for young donkeys from Kaduna state while the least body weight (98.89 ± 6.68 cm) was recorded in Fari strain of donkey from Katsina state. The coefficient of variation was fairly uniform at the young stage except shoulder width (13.0%) and tail length (14.8%) which were moderate. Sexual dimorphism exist in the body size measures of donkeys with females having heavier body weight (120.7kg) and larger heart girth (106.2cm). Zoometric phenotypic differentiations exist among the observed strains of donkeys in the Northwestern Nigeria. Further studies should be carried out on molecular studies for determination of diversity that exists among young donkey strains.

Keywords: Donkey, morphometric, characterization, traits, young and body measurement

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Target Audience: Animal conservationists; Animal Breeders; Geneticists; Extension Agencies