

Effect of age, sex and hemoglobin type on adaptive and blood biochemical characteristics in Red Sokoto Goats

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ABSTRACT:

This study was conducted to evaluate the effect of haemoglobin (Hb) types, sex and age on adaptive and blood biochemical characteristics of Red Sokoto goats. Ninety four (94) goats were sampled from two locations: Dei-dei and Gwagwalada grazing reserved, Abuja. Data were collected on adaptive characteristics {heart rate (HR) and rectal temperature (RT) and adaptive coefficient (AC) was calculated from the HR and RT} and blood biochemical characteristics{ haemoglobin (Hb) types, Hb-concentration (Hb-conc), Potassium concentration (K-conc) and albumin concentration (alb-conc)}. The effects of haemoglobin type, sex and age on the adaptive and blood biochemical characteristics of the goats was analyzed by general linear model (GLM) procedure of SAS. The results showed that the mean RT of the sampled goats was 38.9°C with very minimal variations (CV=0.5).The mean HR of the goats was 76.1bpm, with min and max HR of 70 and 80bpm. The mean albumin, Hb and K concentration were 38.4g/l, 8.9g/dl and 4.0Mmol/l, respectively. The variation of Hb type with adaptive and blood biochemical characteristics was significant ($P<0.05$) except Hb concentration. Higher HR was observed in goats with Hb AA and AB. Age and sex had significant effect ($P<0.05$; $P<0.01$) on HR, AC and albumin concentration of the goats. Although there was no trend in the variation of HR and AC with age, but HR and AC were higher in the older goats than the younger, however the albumin concentration significantly decreased with progressive increase in age of the goats.

Keywords:

Adaptive coefficient, heart rate, rectal temperature, blood biochemical characteristics.