

Physiological responses in goats subjected to road transportation under the hot, humid tropical conditions

ABSTRACT

Animals in transport may be exposed to both psychological and physical stressors, which affect performance and health. Heat stress has been recognized as one of the commonest problems encountered during road transportation of farm animals. The influence of two different stocking densities (0.20 m²/animal & 0.40 m²/animal) in transit under the hot, humid tropical conditions on blood parameters and body temperature were investigated in 30 Boer does. The animals were road transported for 3 h and the control group was kept under normal conditions in the farm. Irrespective of stocking density, transportation increased rectal temperature ($P<0.001$), serum levels of cortisol ($P<0.05$) and glucose ($P<0.001$) and neutrophil to lymphocyte ratios (NLR) ($P<0.001$). Higher stocking density was more stressful to the goats based on NLR. Transportation had no significant effect on serum creatine kinase activity. Results suggested that, irrespective of stocking density, transportation under the hot, humid tropical conditions imposed a severe stress on the goats.

Keyword: Transportation; Stress; Stocking density; Goat