Effect of Stocking Density on Haematological Indices and Welfare of Grower Rabbits *(Oryctolagus cuniculus)* in Tropical Climate

Joshua Teh Soon Yee, [1]Fuzina Nor Hussein & [1]Abdul Rahim Mutalib
[1]Department of Veterinary Pathology and Microbiology
Faculty of Veterinary Medicine, Universiti Putra Malaysia

Abstract

Ten New Zealand white cross rabbits of mixed sexes aged 10 weeks were used to evaluate the effect of stocking density (1 m^2/rabbit and 0.1 m^2/rabbit for 29 days) on haematological indices and welfare parameters in tropical climate. The rabbits were divided equally and allotted to the two stocking densities corresponding to an area of 0.5 m^2 for Group A and 5 m^2 for Group B. The rabbits were fed *ad libitum* with commercial rabbit grower pellets and fresh water was freely available throughout the study period. Each treatment group was also given carrot every Saturday and alfalfa hay every Monday evening as dietary enrichment. Group B rabbits had higher packed cell volume, haemoglobin concentration, mean corpuscular volume and mean corpuscular haemoglobin concentration and recorded a steeper rise of these indices over time when compared to Group A rabbits. Neutrophil/Lymphocyte ratio showed a correlation between social hierarchy and the availability of more space. Group A rabbits had higher weight gain and feed efficiency compared to that of Group B rabbits. However Group B rabbits recorded higher locomotor activity and Group A rabbits were observed to be utilizing the raised platform more. Both groups enjoyed the dietary enrichment exhibiting increased locomotor activity. The results of the study indicate that rabbits kept at 1 m^2/rabbit had better haematological indices and locomotion activities compared to rabbits kept at 0.1 m^2/rabbit in the tropical climate of Malaysia.

Keywords: rabbit (*Oryctolagus cuniculus*), stocking density, haematology, welfare, tropical climate