

Transport density and lamb's welfare

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Transport is a very important economic factor because it can cause physical and physiological stress in farm animals, beyond negative effects on health, welfare, performance and the final product quality. High or low density during transport can cause problems or injuries and falls during transport. For this reason, the number of animals and the space available in the truck must be considered. The aim of this study was to investigate the effects of loading density on blood cortisol variation. Sixty-four White Dorper lambs were transported once for 4 h (195 km) to a commercial slaughterhouse using completely closed and bedded truck. Lambs were located in two separate truck compartments according to loading density: 0.3 m²/animal (n=28; 14 female, 14 male) and 0.2 m²/animal (n=36; 13 female, 13 male). The air circulation was from the top of the cage, without external visual access. Blood samples were also collected before and after transport for analysis of serum cortisol and samples were taken through jugular venipuncture in Vacutainer[®] tubes and kept under refrigeration. Data analysis used mixed procedure of SAS using transport density as fixed effect and as random effect the sex, and the interactions density vs. sex. Each lamb was considered as the experimental unit. In case of significant results (P<0.05); it was adopted the Student t test for multiple comparisons. Lambs transported in density of 0.3 m² per animal had lower levels of cortisol, when compared to those transported at higher density (19.7 vs. 22.3 ng/ml; P<0.05). The lambs in the largest area had lower variation in cortisol levels compared to the lowest area between before and after transport (-3.7 vs. 9.3%; P<0.05), which can demonstrate greater comfort and a positive influence in reducing animal stress.