

Profile of Cortisol in Bali's Crossbreed Cows for 120 Hours Shipping Using Traditional Vessel

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Abstract : Many transportations of livestock in Indonesia is still managed traditionally. Transportation involves several things that may cause stress, from a certain treatment or other factors, either externally or internally, that act as stressors. This study aimed to determine the profile of cortisol and IL-6 in female Bali breeding cattle transported for 120 hours using 100 GT traditional vessels with two floors and a capacity of 300-400 heads. Before transportation, all of the animals have got the vaccination. Blood samples from thirty cows were taken before transportation, during loading, during docking, and after transportation. ELISA method was used to analyze the concentration of cortisol and IL6. The averages of cortisol concentration before transportation, during loading, docking, and after transportation were 78.21 ± 27.96 ng/mL, 90.78 ± 30.91 ng/mL, 69.90 ± 53.92 ng/mL and 69.34 ± 32.03 ng/mL respectively. The average concentration of IL-6 before, during, docking and after transportation were 259.86 ± 70.16 pg/mL, 315.41 ± 64.21 pg/mL, 410.13 ± 247.43 pg/mL dan 424.81 ± 98.86 pg/mL. It was concluded there were no differences in cortisol concentrations and level of IL6 of each cow at different stages of transportation ($p > 0.05$) It would be possible that vaccination could reduce the fluctuation of cortisol.

Keywords : shipping, Bali's breed cows, vessel, cortisol, IL6

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