

**PERFORMANCE OF IMPORTED SHEEP TO KUWAIT UNDER  
SIMULATED PROCEDURES TO TRANSPORTATION PRIOR TO  
SLAUGHTERING**

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**ABSTRACT**

More than three hundred imported Australian sheep were used to determine the ability of project team members to categorize stressed from a lesser stressed animals that transported all the way from Australian ports to Kuwait. Accuracy of differentiating the two groups went up to 90%. Such accuracy encouraged the team members to proceed with the second phase dealing with the initiation of the Stress Score System. This will help the decision maker to give the right grouping decisions for weather animals should go to slaughtering, meat factory, live sales or for housing in the farm. Simulated procedures were used to create stress on experimental animals in two ways. Animals were stressed due to altitude change and kept in multiple level cages that are movable with the movement of the animal and categorized into three sub groups (H = Third floor) , (M = Second floor) (L = Lower or ground floor). The other group of animals was kept under simulated measure of tough handling processes ((Th= Tough handling) or normal handling processes (Nh-G = Normal handling). Animals exposed to simulated actions for location and handling showed a decline in cortisol levels by time. This was shown clearly by plotting the linear trend graph for the response of serum cortisol level in animals exposed to the several stress actions. Animals in L floor fluctuate lesser than the other groups. All animals exposed to tough handling had higher serum cortisol level than the Nh group. Animals from H and M floors gained lesser weights than those from L floor throughout the experiment time. Meanwhile, Nh group gained lesser weight than those inTh group. Animals under higher stress in all the groups showed darker meat, less tenderness and poorer taste preference. Ratios of liver, kidney and heart weights to the half carcass weight were

measured. Liver and kidney ratios for those under higher stress were higher but the opposite with the heart ratios. Cortisol level for animals that head covered at slaughter time was lower than those without a head cover while color, taste and tenderness did not show significant difference due t the short time of the stress effect.

**KEY WORDS: Lamb, stress, transportation, handling, simulation, physiological parameters.**