

The Effects of Stocking Density in Transit on Blood Profile and Pork Quality

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In a trial involving 172 pigs, the effects of transport stocking densities of 0.3, 0.4 and 0.5 m²/per 110kg pig on blood profile, skin damage of carcass, muscle pH and color were investigated. The pigs came from a farm and were transported six times. They were transported for an average 1hr 30 min from farm to slaughter house, and held in lairage for 1hr.

Blood profiles (cortisol, β -endorphin, glucose and lactate dehydrogenase) except CPK (creatine phosphokinase) were not significantly ($p>0.05$) different among all stocking densities. The CPK level of a stocking density of 0.3m² was significantly ($p<0.05$) higher than that of other stocking density groups. This result suggested that higher transport density resulted in more physical stress to pigs during transportation. There were no significant differences in skin damage scores of carcasses among stocking density groups. However, 0.4m² stocking density group showed significantly ($p<0.01$) higher pH₂ and pH_u values of the loin than those of 0.5m² stocking density group. There were no significant differences in meat color measurements (CIE L* and a*) among stocking density groups. These results imply that glycolysis of postmortem muscle could be affected by stocking density in transit without skin damage and muscle color change.