Influence of animal handling and transportation factors on the welfare of slaughter pigs during transport and incidences of deads and downers

NPB# 04-106

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Date Received: January 20, 2006

Abstract: Two studies were carried out to investigate the effects of feed withdrawal prior to transportation (0 vs. 24 hours without feed), mixing of pigs from different groups on the trailer (mixed vs. unmixed), and floor space on the trailer (0.39 vs. 0.46 vs. 0.54 m²/pig) on transport losses, physical and metabolic indicators of stress, and pig behavior. A total of 72 trailer loads of pigs from the same production site transported to the same slaughter plant at two different times of the year (February-March vs. August-September) were used. The same design of straight, double-deck trailer was used for all loads with treatments being compared in the front three compartments of both the top and bottom decks of the trailer. There was no effect of the feed withdrawal or mixing treatments on transport losses or on the indicators of stress measured in this study. Floor space on the trailer had an effect on total transport losses, with the effect depending on the time of year. In the cooler months, there was no difference between the total transport losses for the three floor space treatments (0.26 vs. 0.23 vs. 0.27% for the 0.39, 0.46 and 0.54 m²/pig treatments, respectively), however, in August-September, total losses were greatest at the lowest floor space (0.72 vs. 0.16 vs. 0.00%, respectively). During the journey, pigs at the lowest floor space also spent more time sitting and less time standing than those at the higher floor spaces. Total transport losses in this study were very low, averaging around 0.30% of pigs transported, demonstrating that it is feasible to transport pigs under commercial conditions with minimal losses.