

Effects of familiarity and weight variation on aggression among grow-finish pigs following regrouping

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An experiment was conducted to study effects of familiarity and weight variation at regrouping on aggression and growth performance of pigs. Pigs ($n = 180$) at 8 wk of age ($BW = 23.0 \pm 3.11$ kg) from 3 group farrowing rooms where they mingled within each room from 10 d of age were used. Five groups of 9 pigs (5 males:4 females) were allotted to each of the four treatments: familiar pigs of uniform BW, familiar pigs of mixed BW, unfamiliar pigs of uniform BW and unfamiliar pigs of mixed BW. Familiar groups consisted of pigs from one farrowing room, and unfamiliar groups consisted of 3 pigs from each of the 3 farrowing rooms. Uniform groups were formed by using the middle 2 quartiles and the mixed weight groups by using the heaviest and lightest quartiles of pigs. Aggression and activity were observed directly for 4 h during the first 3 d, on d 7, and d 14 post regrouping. Skin lesions on head, shoulders and body were scored (scale 0-3 based on the number of scratches) on all pigs 48 h post regrouping. Total fighting durations were higher in unfamiliar groups during the first (48.5 vs 0.5 s/(pig.4h), SE = 15.39; $P < 0.001$) and second day (10.8 vs. 0.4 s/(pig.4h), SE = 4.58; $P < 0.005$) post regrouping than in familiar groups. Unfamiliar pigs had higher total injury scores (6.5 vs 1.2, SE = 0.40; $P < 0.001$) and spent less time eating during the first day (5.2 vs 8.9%, SE = 1.31 of total observation time; $P < 0.01$) post regrouping than familiar pigs. There was an interaction ($P < 0.02$) in injury score between familiarity and BW variation as pigs of mixed BW compared with uniform BW increased injury scores in unfamiliar groups but not in familiar groups. ADG in unfamiliar groups was lower during the initial 6 wk (809 vs 849 g/d, SE = 11.2; $P < 0.001$) but not for the entire 15 wk (806 vs 821 g/d, SE = 9.7; $P = 0.11$) compared with familiar groups. Familiarity did not affect ADFI or G:F. Sorting pigs by familiarity and weight at mixing could be beneficial in terms of alleviating aggression-associated injuries.

Key Words: Aggression, Familiarity, Pigs, Regrouping, Weight variation.

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