

The behavior, welfare, growth performance and meat quality of pigs housed in a deep-litter group housing system compared to a conventional confinement system.

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The behavior, welfare, growth performance, and meat quality of deep-litter, group-housed pigs was compared to pigs raised in confinement. Mixed sex groups (9 weeks of age) were housed in a confinement barn (CB; 15 pigs/pen; 0.94 m<sup>2</sup>/pig) or hoop barns (HB; 90 pigs/pen; 1.65 m<sup>2</sup>/pig). Behavioral observations were conducted and stress physiology assessed at weeks 1, 8, and 13. Fearfulness of pigs was assessed using a novel test at 13 weeks. Pigs in HB spent more time ( $P < .05$ ) standing, locomoting, and interacting with their environment. At 8 weeks but not 1 or 13 weeks, CB pigs engaged in more ( $P < .05$ ) social interactions than HB pigs. Salivary cortisol was higher ( $P < .05$ ) in HB pigs compared to CB pigs in week 1 but similar in weeks 8 and 13. More exploratory behavior ( $P < .05$ ) was exhibited by HB pigs compared to CB pigs in the novel test. A trained sensory taste panel found no differences in tenderness, juiciness or overall desirability of loins from HB or CB pigs. In this experiment, housing system modified pig behavior, fearfulness, and stress physiology but these differences did not influence meat quality.

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