The Performance and Behavior of Early-Weaned Piglets Following Transport: Effect of Weaning Weight

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Published online: 24 Mar 2009.


To link to this article: http://dx.doi.org/10.1080/10888700902720664

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barrows: 7.72 ± 0.30, i1 (gilts: 9.32 ± 0.52, barrows: 9.98 ± 0.51), p3 (gilts: 19.15 ± 0.42, barrows: 19.55 ± 0.38), p4 (gilts: 29.93 ± 0.56, barrows: 24.94 ± 0.54). Factors influencing eruption time were gender (sooner in gilts: p3, p = .0011; p4, p = .0057; p4, p = .0072; i1, p = .0045), birth weight (heavier piglets having earlier eruption: i1, p < .0001; p3, p < .0001; p3, p = .0002; p4, p = .0015; p4, p < .0001), Week 1 average daily gain (ADG) (higher gaining piglets having earlier eruption: p3, p = .0064; p4, p = .0010; i1, p = .0014), Week 2 ADG (p4, p = .0358), and sow parity (higher parity sows having piglets with earlier eruption of i1, p = .0131). This study demonstrates eruption times are highly variable and can be influenced.

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Two groups of 48 Cotswold piglets were weaned at 17 ± 1 day of age and assigned to road or simulated transport during summer or winter. Following transport (0, 6, 12, or 24 hr), piglets were grouped in pens of 4 individuals of similar weight, producing pens of relative light (5.26 ± 0.72 kg), medium (6.19 ± 0.7 kg), and heavy (7.4 ± 1.07 kg) pigs. Body weights were recorded on Days 1–8, 10, 12, and 14; piglet behavior was recorded on Days 1–4, 7, and 14 postweaning and transport. Across season and transport treatment, heavy piglets continued to lose weight longer relative to light piglets (2.26 days vs. 1.7 days, p < .02). The average daily gain between day of recovery and Day 14 posttransport was higher for light (6.14%) and medium (6.1%) than for heavy piglets (5.05%, p < .01). Light piglets also showed better feed conversion efficiency compared with heavy piglets (0.94 vs. 0.90, p < .05) during the first 14 days following weaning and transport.

Steinar Wamnes and Robert J. Berry are now with Manitoba Agriculture, Food and Rural Initiatives (MAFRI). Nora J. Lewis passed away in December 2008.

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Across season and transport treatment, heavy piglets spent more time fighting ($p < .005$) during the 1st day in housing and less time feeding ($p < .05$) during the first 3 days in housing compared with light and medium piglets. These results suggest that large piglets within a litter may be less prepared for abrupt weaning relative to their smaller littermates, possibly due to a stronger dependency on a pure milk diet. Grouping heavy piglets may also result in high levels of initial aggression, causing reduced levels of maintenance behaviors such as feeding, drinking, and resting relative to light and medium piglets. Grouping early-weaned piglets according to weight may therefore exacerbate weaning-induced stress, causing reduced welfare, particularly in regard to the heavy piglets within litters.

Animal Welfare in Planning Foreign Animal Disease Outbreak Management: What Can Epidemiologists Contribute?

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Planning foreign animal disease (FAD) outbreak management is essential to safeguard the health and welfare of nonhuman animals on the farm in the United States. In the event of an FAD, animal welfare, although not being ignored, may be suboptimal if there is not thoughtful and advance consideration.