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## Supplementary file

Temporary crate opening procedure affects immediate post-opening piglet mortality and sow behaviour

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**Supplementary Methods**

**Figure S1.** Temporary sow confinement pens in the cabin arrangement, illustrating crates in both the open (left) and closed (right) position (image courtesy of EM Baxter).

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**Figure S2.** Temporary sow confinement pens in the room arrangement, illustrating crates in the open position, with the closest sows facing the rear of the pen (image courtesy of RL King).

**Supplementary results**

**Supplementary Material S1.** Results for average duration of sow posture changes.

## Average duration of postures

Average bout duration of all postures by day and treatment are shown in Figure S2. Average duration of standing differed across days (*P* < 0.0001), being higher on the day of crate opening than the day before (*P* < 0.0001) or after (*P* < 0.001). Average duration of sitting was affected by treatment (*P* < 0.05), being higher for AM than both PM (*P* < 0.05) and ALL (*P* < 0.01). Average duration of ventral lying differed across days (*P* < 0.05), being higher on the day before than the day of crate opening (*P* = 0.01) and tending to be higher than the day after (*P* = 0.067).

Sow parity tended to affect the average duration of ventral lying (*P* < 0.069) and standing via a parity x day interaction (*P* = 0.059; Table S1). Average duration of ventral lying was lower for parity 1 sows (4.83mins ± 0.70) than parity 2-5 sows (6.28mins ± 0.61; *P* < 0.05) or parity 6+ sows (6.40mins ± 0.76; *P* = 0.058). Average duration of standing was increased on the day of crate opening than the day before or day after for parity 1 sows (before *P* < 0.0001; after *P* < 0.01) and parity 2-5 sows (before *P* < 0.001; after *P* < 0.01), but no different across days for parity 6+ sows. This meant that on the day of crate opening, average standing duration was lower for parity 6+ sows than both parity 1 sows (*P* < 0.01) and parity 2-5 sows (*P* = 0.057; Table S1).

**Figure S3.** Least square means (± s.e.) for average duration of sow postures by day and crate opening treatment. Starting top left, clockwise: standing, sitting, ventral lying and lateral lying. Day effects within each treatment for Before-During and Before-After are indicated on the latter bar, with During-After differences indicated between bars ( ϯ(*P* < 0.10), \*(*P* < 0.05), \*\*(*P* < 0.01), \*\*\*\*(*P* < 0.0001)). Treatment effects within each day are indicated with different letters (*P* < 0.05).

A

B

**Table S1.** Least square means (± s.e.) of average sow standing bout duration (mins) by sow parity and day relative to crate opening.

|  |  |  |  |
| --- | --- | --- | --- |
| Parity / Day | Before | During | After |
| 1 | 4.35 ± 2.27a | 15.23 ± 2.37b | 8.10 ± 2.23a |
| 2-5 | 5.13 ± 2.01a | 11.98 ± 2.07b | 6.54 ± 1.96a |
| 6+ | 7.27 ± 2.23a | 7.99 ± 2.26a | 7.16 ± 2.25a |

a,b Values within rows with different superscripts differ significantly (*P* < 0.05).