

Temporary confinement of sows in SWAP farrowing pens for 4 days reduces piglet mortality

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Commercial viability of loose housed farrowing systems is challenged by risk of increased piglet mortality.

Objective:

To investigate if short-term confinement around farrowing in a SWAP farrowing pen (SWAP = Sow Welfare And Piglet protection) would decrease piglet mortality compared to loose housed sows.

- The study was conducted in a Danish piggery and records were obtained from 2,139 farrowings.
- Sows were randomly allocated to one of three treatments: Loose-Loose (LL), Loose-Confined (LC) and Confined-Confined (CC) (Figure 1).

Table 1. Production system performance on batch level for loose housed or temporary confined sows.

	LL	LC	CC	P-value
Batches, n	58	56	59	
Total piglet mortality, %	26.0 ^a	25.4 ^a	22.1 ^b	< 0.001
Crushed piglets, % ¹	10.7 ^a	9.7 ^b	7.8 ^c	< 0.001
Live born mortality, %	21.4 ^a	21.4 ^a	17.9 ^b	< 0.001

¹ Calculated as percent of total born.

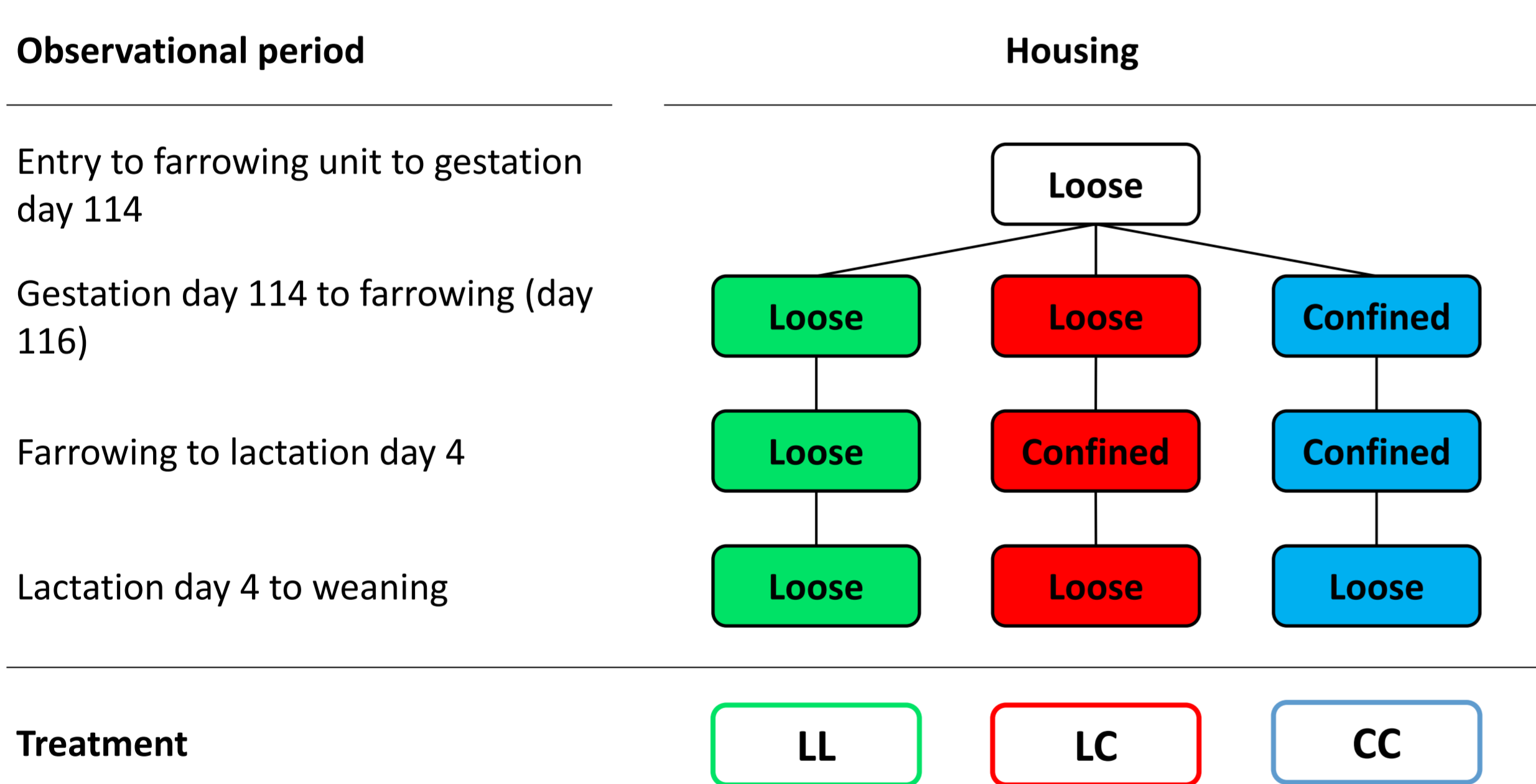


Figure 1. Illustration of the experimental design. All sows were loose at entry to the farrowing unit, were treated according to three different strategies for confinement around farrowing, and then loose from day 4 throughout lactation.

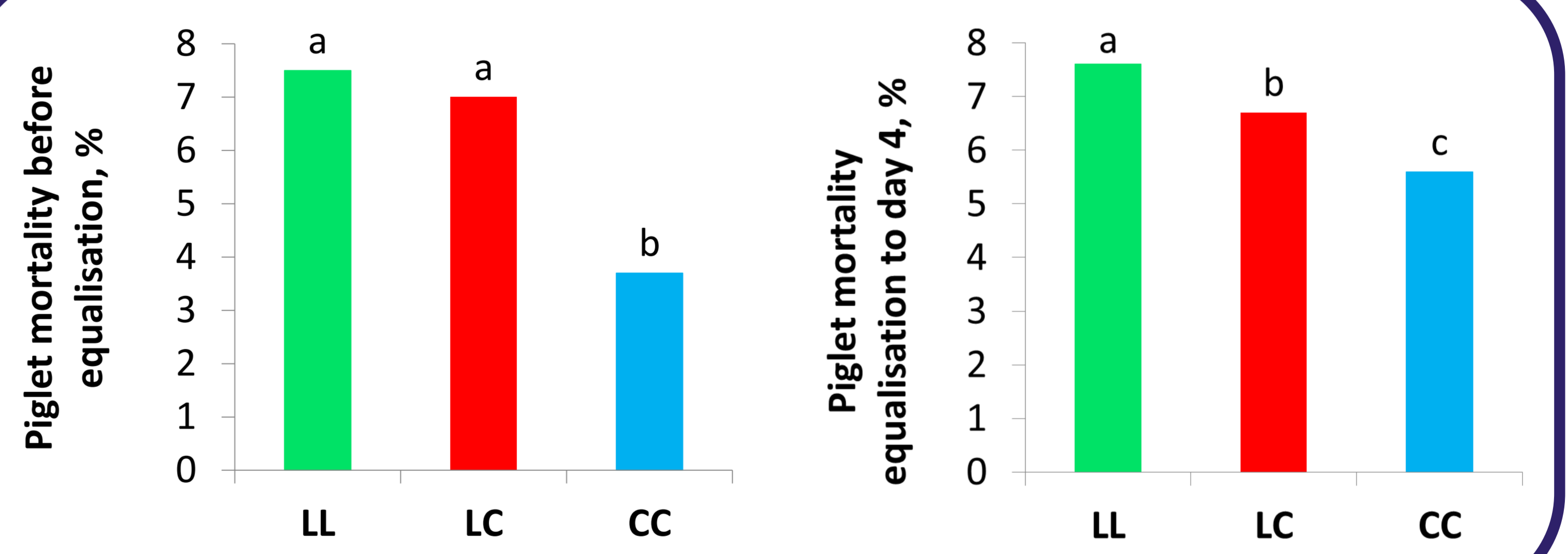


Figure 2. Piglet mortality before litter equalisation (left) and from litter equalisation to day 4 (right) for sows that were loose housed or temporary confined. Calculated as percent of live born before litter equalisation and percent of equalised litter size after equalisation



Figure 3. A loose housed sow and a temporary confined sow.

Table 2. Litter characteristics for loose housed or temporary confined sows.

	LL	LC	CC	P-value
Sows, n	682	668	658	
Total born, n	17.7	18.1	17.9	P = 0.06
Live born, n	16.6 ^a	17.1 ^b	17.0 ^b	P = 0.01
Equalised litter size, n	13.7	13.7	13.8	P = 0.06

The results emphasize:

- That the period of time from the birth of the first piglet to litter equalization is important in relation to piglet mortality.
- That confinement for 4 days after farrowing can reduce mortality in this period.
- That confinement from before farrowing was necessary to reduce total piglet mortality.