Similar farrowing progress among sows in crates and in pens

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Acknowledgement

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Background

Confinement of sows in farrowing crates

- Limits nest-building behaviour (Baxter et al., 2011)
- Increases physiological stress (Jarvis et al., 2004)

Increased stress can adversely affect the process of parturition (Oliviero et al., 2008)

Restricting sows in crates may have negative impact on farrowing progress

- Prolonged farrowing
- Longer birth intervals

The aim of our study was to investigate the effect of temporary crating on farrowing progress

We hypothesised that loose housed sows would have shorter duration of farrowing and shorter birth intervals

Materials and methods

Trial conducted in a 400 sow piggery

123 multiparous sows mated with Duroc semen

Sows on trial from d 114 of gestation to d 7 post farrowing

Randomly allocated to 4 different treatments

Recorded data was analysed by use of mixed model using SAS ver. 9.3

Materials and methods

	Treatment group			
Observational period	CC	CL	LC	LL
P1	C	C	L	L
P2	C	L	C	L
P3	L	L	L	L

P1 = Day 114 of gestation to end of farrowing

P2 = Day 0 to day 4

P3 = Day 4 to day 7

C = Confined in crate

L = Loose-housed

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Results

Parity

- **3.5 ±1.93**
- No difference between crated and loose housed sows (**P = 0.97**)

Litter size

- **18.5 ± 4.23** total born piglets per litter
  - No difference between groups (**P = 0.85**)
- **1.4 ± 1.61** stillborn piglets per litter
  - No difference between groups (**P = 0.58**)

Results

	Crate[1]	Loose-housed	P-value
Sows, n	62	58	
Farrowing duration			
BFP to BLP[2], min	387 (264; 646)	390 (227; 580)	0.41
BFP to BLL[2], min	353 (249; 505)	374 (224; 503)	0.25
Birth interval[3], min	11 (5; 25)	11 (5; 25)	0.29

[1] Treatment from day 114 of gestation to the end of farrowing.
[2] Duration of farrowing: BFP = birth of first piglet, BLP = birth of last piglet, BLL = Birth of last live born piglet.
[3] Time interval between two succeeding piglets.
Values are presented as medians and number in parentheses are quartiles, (P25; P75)

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Results

Treatment P1[1]	Crate		Loose			
Treatment P2	Crate	Loose	Crate	Loose	se	P-value
Sows, n	30	32	28	30		
Mortality P2 before equalisation, %	**6.3[a]**	**8.1[a]**	**7.4[a]**	**14.7[b]**	**0.01**	**< 0.001**
Equalised litter size, n	13.2	13.4	13.1	13.4	0.27	0.90
Mortality P2 after equalisation, %	**5.5[a,c]**	**10.3[b]**	**3.8[c]**	**9.2[a,b]**	**0.03**	**< 0.001**
Mortality P3, %	5.3	3.0	4.3	2.5	0.01	0.15

[1] P1 = Day 114 of gestation to end of farrowing, P2 = Day 0 to day 4, and P3 = day 4 to day 7.
[a,b] Values within a row with different superscripts differ significantly at $P<0.05$.

Discussion

Our result differ from Oliviero et al., (2008) who observed longer farrowing duration in crates compared with pens.

- Only sows in pens were provided straw

In accordance with our findings Jarvis et al., (2004) found that housing in crates did not influence progress of parturition

Rooting material might be more important than space???

Piglet mortality in the first days after farrowing remains problematic when sows are loose

Conclusion

Our hypothesis was rejected!

Farrowing progress was not affected by confinement of the sow

However crating for 4 days after farrowing improved piglet survival

- In accordance with previous findings in our group (Moustsen et al., 2013)

Thanks for listening