



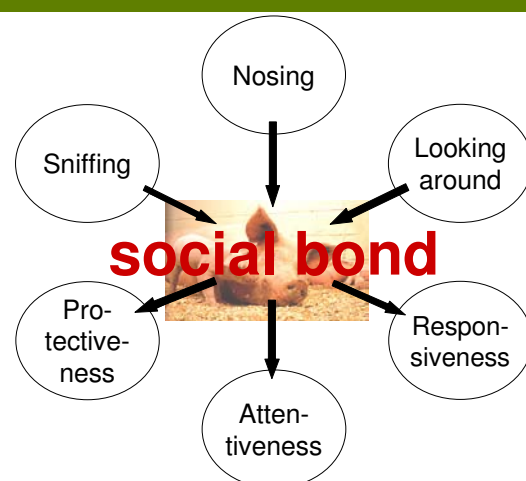
# Influences of sows' activity in pre-lying behaviour patterns on the crushing of piglets

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## Does sows' pre-lying behaviour express maternal behaviour?

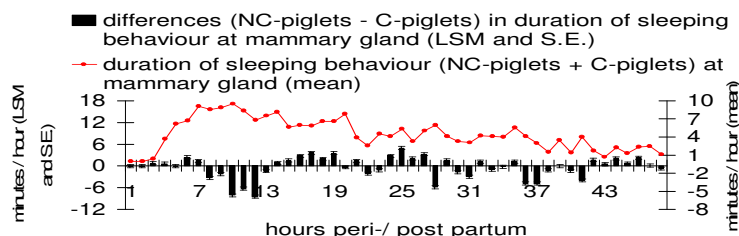
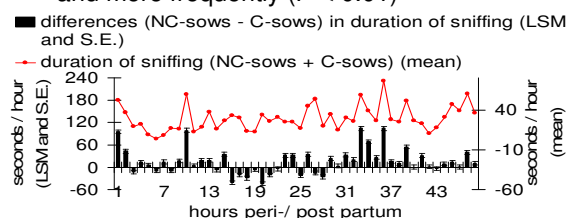
### Data and Analysis

- One nucleus herd of the breeding company Hülshenberger Zuchtschweine
- 386 Landrace sows were continuously videotaped 48 hours peri-/ post partum
- Sows were housed in conventional farrowing crates
- Considering different matching criteria (number of piglets born alive, parities, farrowing date) sows were randomly sampled by block data design
- Comparison of pre-lying behaviour traits and resting-activity cycles between 20 sows - crushed none (**NC-sows / NC-piglets**) and 20 sows - crushed one or more piglets (**C-sows / C-piglets**)
- Observations = Differences of NC-sows (NC-piglets) minus C-sows (C-piglets) were calculated per hour



### Results

- Sniffing behaviour: primiparous NC-sows performed for a longer duration ( $P < 0.01$ ) and more frequently ( $P < 0.01$ )
- C-piglets' sleeping and activity behaviour at the mammary gland was longer than of NC-piglets ( $P < 0.1$ )
- Looking around: NC-sows, especially multiparous ones, looked around more often ( $P < 0.05$ )
- Nosing behaviour: Primiparous NC-sows performed more attentiveness towards their piglets per nose-to-nose contact, often in combination with looking around before lying-down by kneeling on front legs ( $P < 0.05$ )
- Resting-activity cycles: In contrast to the duration, the piglets' frequency of activity did not differ between NC- and C-piglets



### Conclusion and Outlook

- NC-sows performed more pre-lying behaviour than C-sows, resulting in more interaction between the sow and the piglets and minimising the risk of crushing.
- Pre-lying behaviour promoted the social bond between sow and piglets.
- In further studies, the relationship between these behavioural differences and behaviour test should be figured out with special respect to modern housing facilities, offering more space to the sow and therefore demanding for well developed maternal responsiveness.

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