

# The development of ingestive and social behavior of piglets under confinement and outdoors

A. Martendal<sup>1</sup>; R. Somavilla<sup>1</sup>; O. A. Dalla Costa<sup>2</sup>; M. J. Hotzel<sup>1</sup>

<sup>1</sup>Universidade Federal de Santa Catarina, Brazil; <sup>2</sup>EMBRAPA Swine and Poultry, Brazil

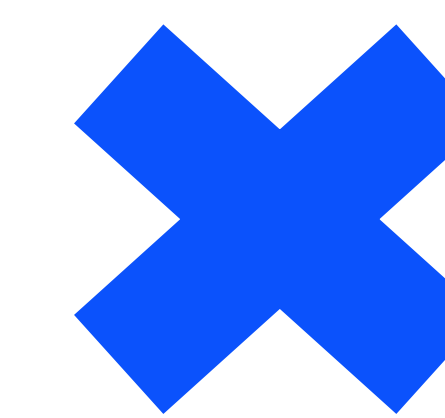


## Objectives

- To compare the behavior of F1 (Landrace x Large White) x MS60 lactating litters raised under two different husbandry systems.

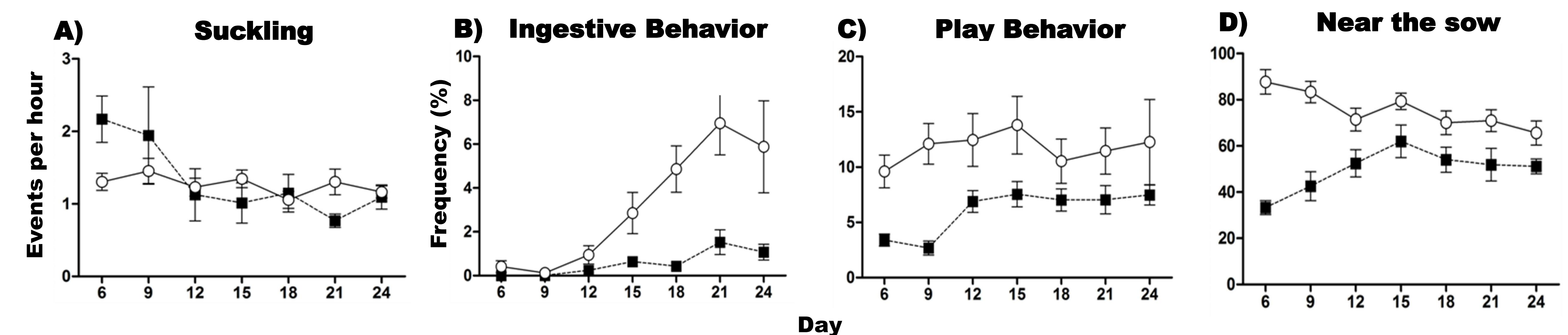
## Methodology

- Behavioral observations were done every 3 days from the 6<sup>th</sup> until the 24<sup>th</sup> day after birth.
- Husbandry System 1: Confinement - conventional maternity crates (10 litters).
- Husbandry System 2: Outdoor paddocks (400m<sup>2</sup>) with access to shade, pasture and a hut (11 litters).

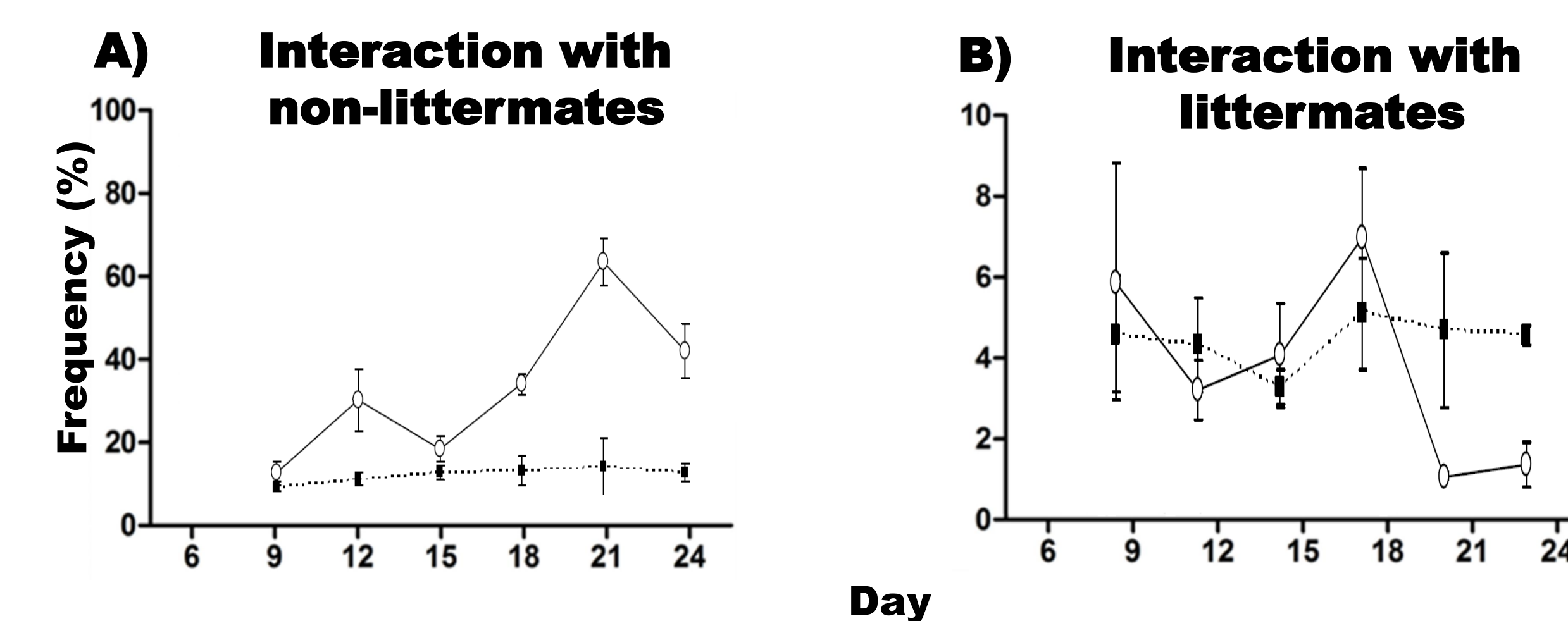


## Results

- Outdoor piglets presented a higher frequency of ingestive behaviors ( $P=0.0002$ ) and suckling ( $P=0.013$ ), spent more time drinking water ( $P=0.0006$ ), and carried out more play behavior ( $P<0.0001$ ).
- Confined piglets were more frequently observed sleeping ( $P=0.036$ ) and interacting with littermates ( $P=0.006$ ), whereas total frequency of social interactions was half the amount observed in outdoor litters.
- There was a positive relationship between eating and drinking in both systems ( $P<0.01$ ;  $r^2=0.35$ ), and a negative relationship between suckling and rooting for outdoors piglets ( $P<0.01$ ;  $r^2=0.44$ ).
- Within the outdoor litters, piglets that spent more time away from the sow grazed more ( $P=0.002$ ), interacted more both with littermates ( $P=0.04$ ) and with non-littermates ( $P=0.001$ ), than those that spent less time away from the sow.



Comparison of piglet behaviour in two husbandry systems (confined  $\blacksquare$  and outdoor piglets  $\circ$ ) over an 18 day period starting at 6 d of age. A) Events (mean  $\pm$  SE) per hour of suckling; Relative frequency (mean  $\pm$  SE) of: B) Ingestive behavior; C) Play behavior; D) Near the sow (within 2m).



Relative frequency (mean  $\pm$  SE) of the interactions with non-littermates (A) and with littermates (B) between outdoor litters that spent more time away from the sow ( $\circ$ ) and litters that spent less time away from the sow ( $\blacksquare$ ).

## Conclusions

- The outdoor system seems to have allowed piglets a higher degree of independence from the mother, stimulating foraging, exploration and social behaviors.
- Piglets with increased independence may be better able to handling weaning.