

Predisposing factors for damaging behaviour during early development – **a role for early feeding?**

From beak to tail 07-08-2017, Anouschka Middelkoop

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Aim

- To study the role of solid feed availability in early life on the behavioural development of piglets around weaning
- Hypothesis: Early feeding:
 - ↑ explorative, social behaviours
 - ↓ re-directed foraging behaviours, weaning-stress-induced behaviours



Feed vs. no feed

- Fibre-rich feed from 2 days of age vs. no feed during lactation
= Early-fed piglets (**EF**, n=12) vs. non-fed piglets (**NF**, n=10)
- Weaning at 4 weeks, pigs were followed until 6 weeks
- Post-weaning: n=8 pens/treatment, 4 pigs/pen



Farrowing pen

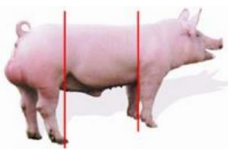


Weaner pen

Measurements

- Home pen observations (explorative/social/damaging behav.)
- Skin lesions¹ and manipulation scores² on piglets and sows

NB. No tail docking and teeth clipping

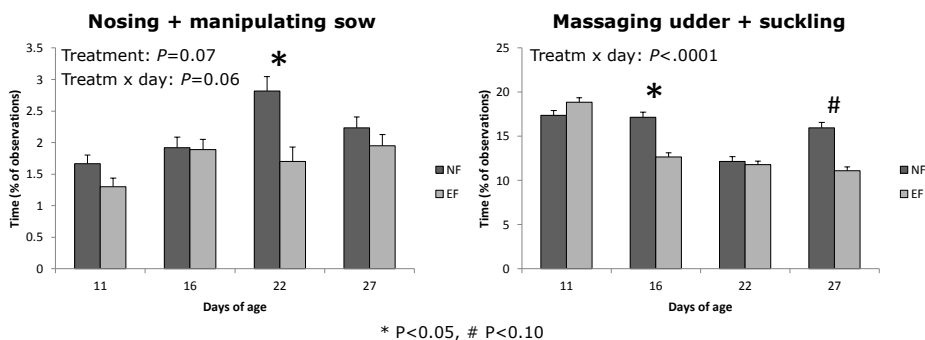


¹Turner et al., 2006; ²Van Nieuwamerongen et al., 2015

Pre-weaning results

- Changes in fighting, but skin lesions not affected
- Damaging behaviours towards piglets and manipulation scores not affected, but...

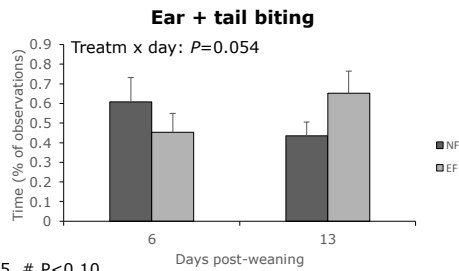
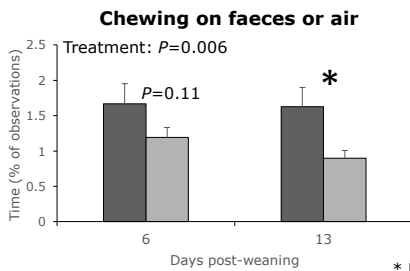
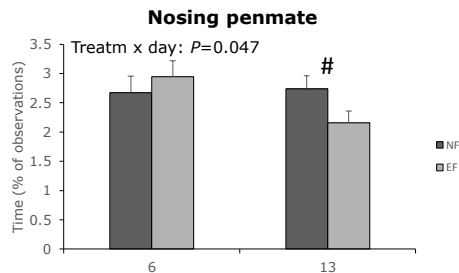
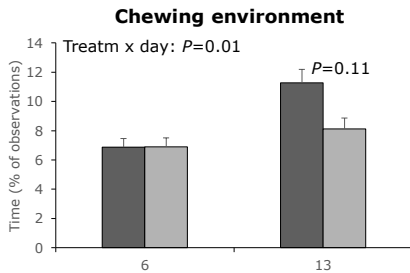
NF piglets showed more sow-directed behaviour



But did not cause higher manipulation scores for sows of NF piglets

Post-weaning results

- No difference in belly nosing
- No difference in fighting and skin lesions
- Changes in chewing and biting behaviour



* $P < 0.05$, # $P < 0.10$

No differences in manipulation scores

Discussion

- Low feed intake level during lactation
 - Piglets had 1 chain to chew on pre and post-weaning plus 1 extra alternating toy post-weaning, large pen sizes
 - Post-weaning dip: short latency to eat, no weight loss
- Effects may be larger with increasing feed intake and under more barren/stressful conditions

Conclusion

- Early feeding during lactation slightly affected the development of explorative, social and damaging behaviours around weaning compared to no feeding
- However, whether these behavioural changes are beneficial for piglet welfare or not remains unclear

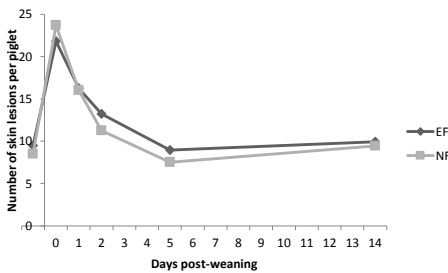
Future perspectives

- Compare behavioural development between non-eaters, bad and good eaters
- Long-term effects of early feeding on behavioural development (of piglets in a barren environment)

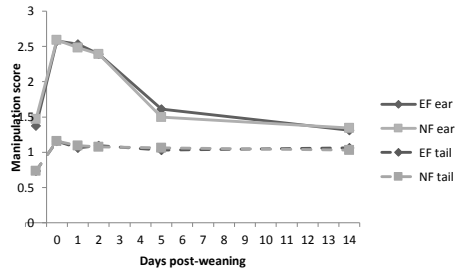


Aggressive and damaging behaviour over time

Skin lesions



Manipulation score



Damage scores

Score	Ear	Tail	Vulva	Udder	Teat
0	No damage	No damage	No damage	No damage	No damage
1	Bite marks	Bite marks	Small lesions (≤ 2 cm)	Mild i.e. ≤ 2 packages damaged, superficial damage	Mild i.e. wounds < 1 cm and ≤ 1 teat damaged
2	Small wound	Small wound	Healing large lesion(s) (> 2 cm)	Moderate i.e. > 2 packages damaged and ≥ 1 deep wound	Moderate i.e. wounds > 1 cm or 2 to 3 teats damaged
3	Medium wound	Medium wound, partial tail loss	Bleeding/red large lesion(s) (> 2 cm)	Severe i.e. > 2 packages damaged, many deep wounds or > 1 cm	Severe i.e. > 3 teats damaged and milk duct is affected
4	Large wound, partial ear loss	Large wound, total tail loss			