



The effect of mixing after weaning on tail biting during rearing

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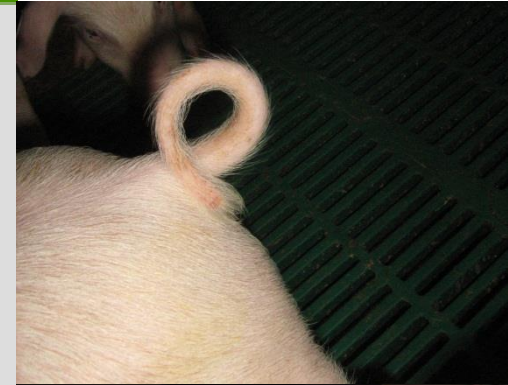
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Definition

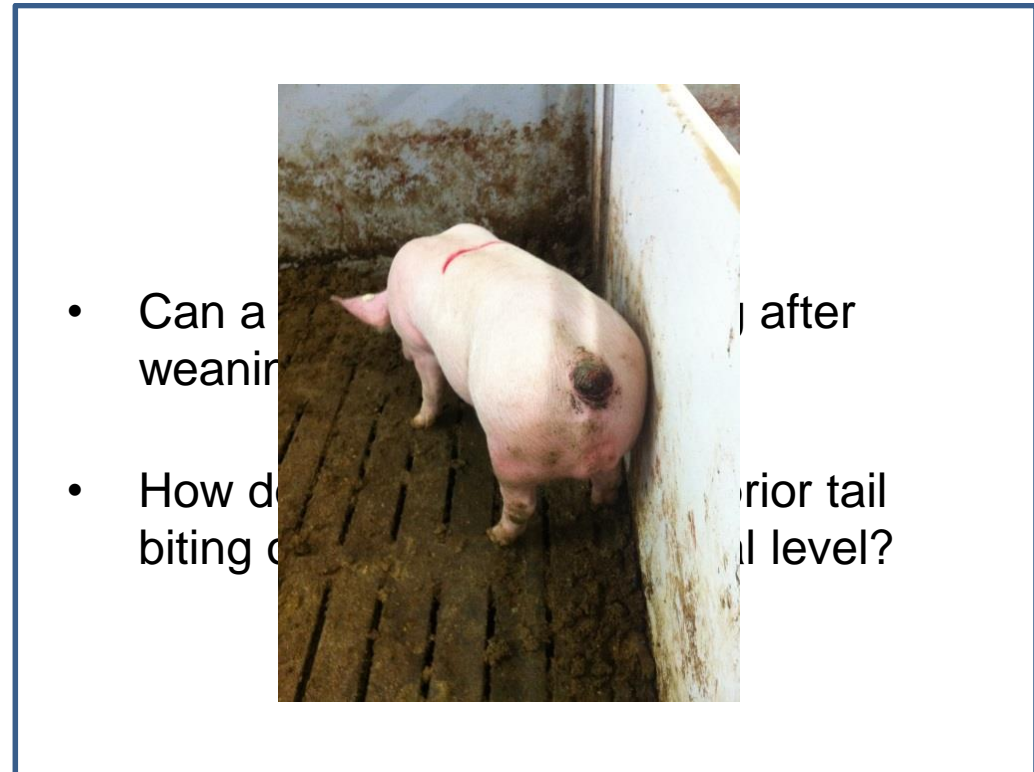
What is tail biting?

Tail biting can be classified into three categories (Taylor et al., 2010)

- „**Two stage**“
→ Low-stimulus environment
- „**Sudden-forceful**“
→ Lack of resources
- „**Obsessive**“
→ Individuals with health problems

Consequences:

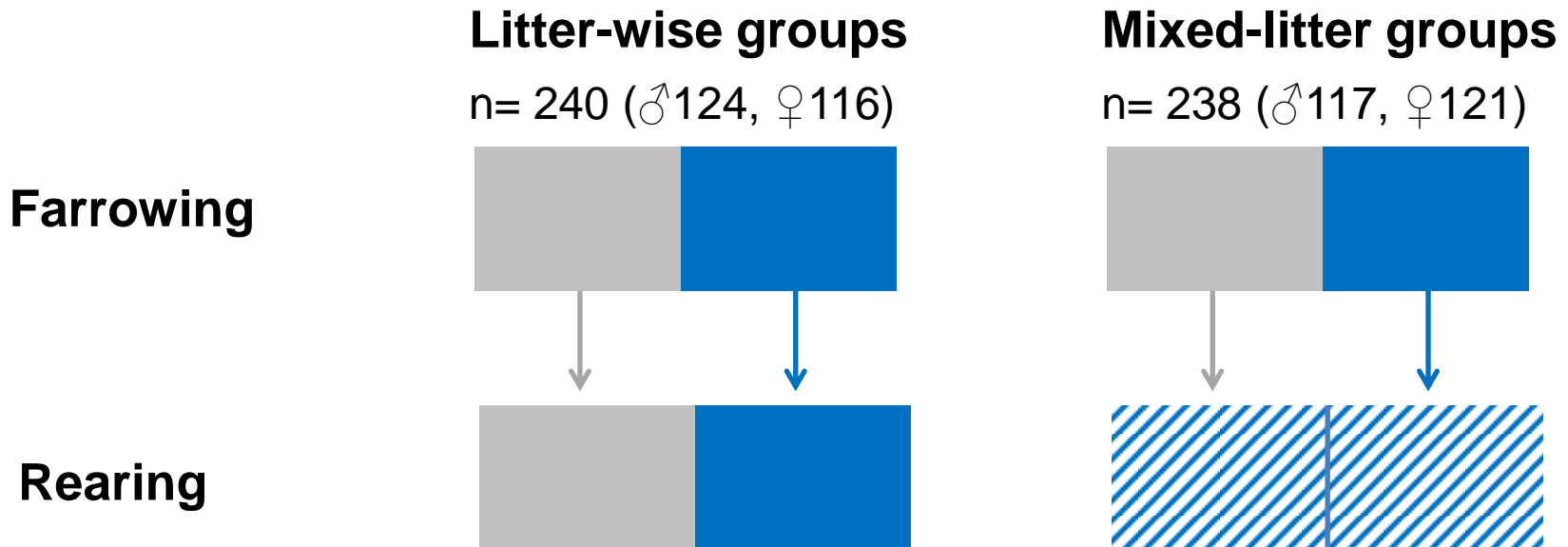
- Reduced animal welfare
- Possible spread of infections
→ Economic losses





Materials & Methods

- **Observation period:** January until April 2014
- **Renunciation of tail docking**



- **Offering of alfalfa hay** once per day
- **Weekly scoring** of the tails



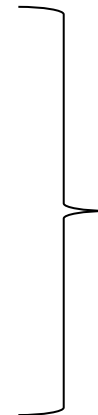
Scoring

Damage

- No visible damage
- Scratches, light bite marks
- Moderate damage
- Severe damage



Bite occurrence



Tail length / Loss of tail

- Original
- Loss of tail tip (max. $\frac{1}{4}$)
- Partial loss (at least $\frac{1}{4}$)
- Total loss / Necrosis



Tail losses



Scoring



Original length



Loss of tail tip



Partial and total losses



Model

Procedure Glimmix (SAS® 9.2): „Multinomial subject specific model“

Target variables:

- Bite occurrence
- Tail losses

Fixed effects:

- Group (Litter-wise, Mixed-litters)
- Batch (1-5)
- Week after weaning (1-6)
- Interaction of group and batch

Random effect:

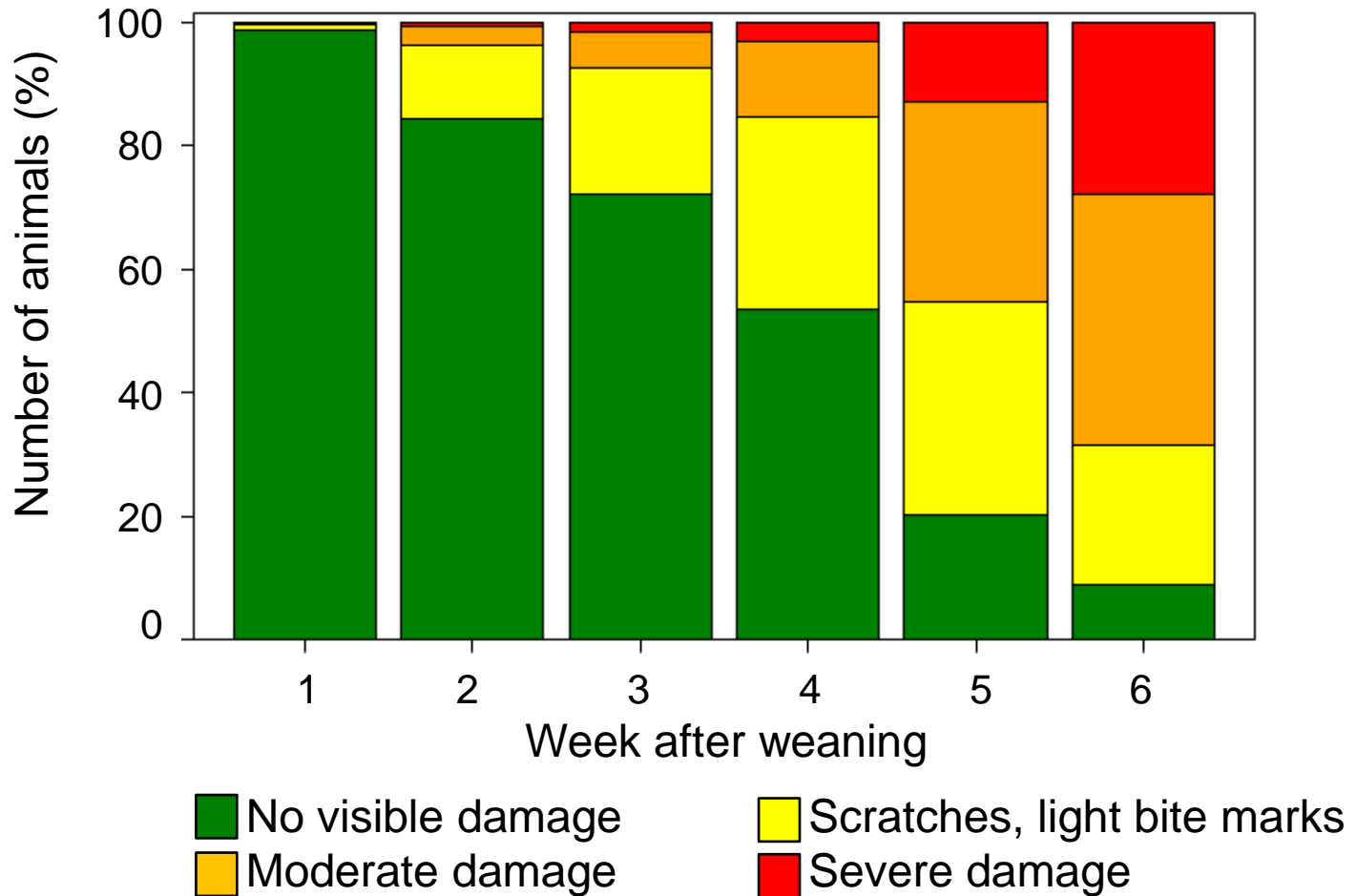
- Piglet (nested in group and batch)





Bite occurrence - Week effect

Estimated frequencies over 6 weeks after weaning

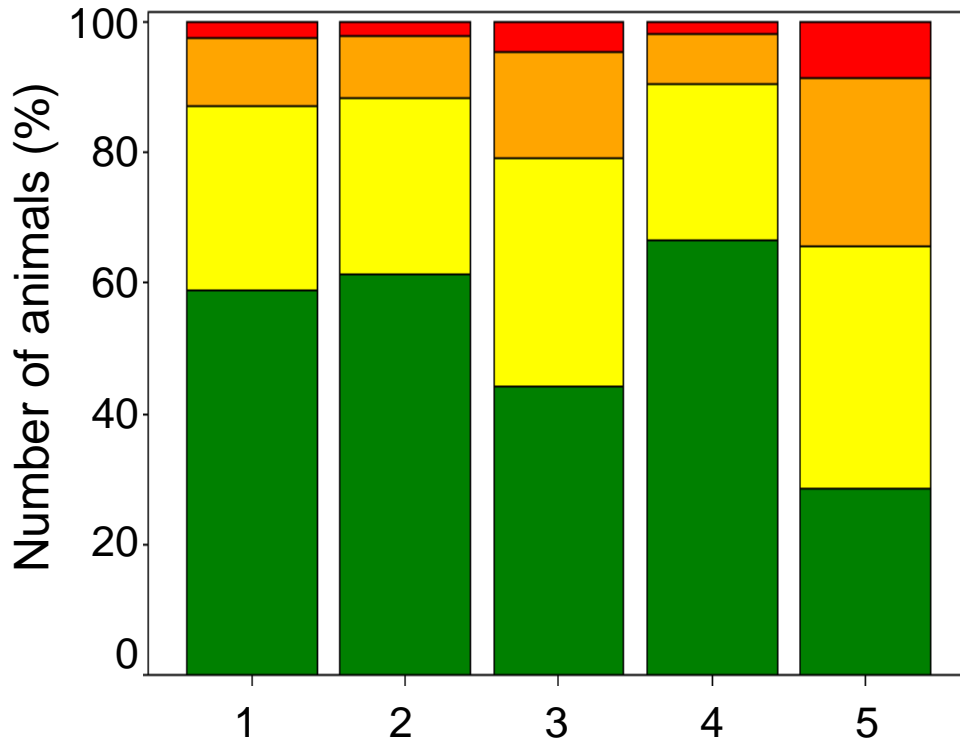




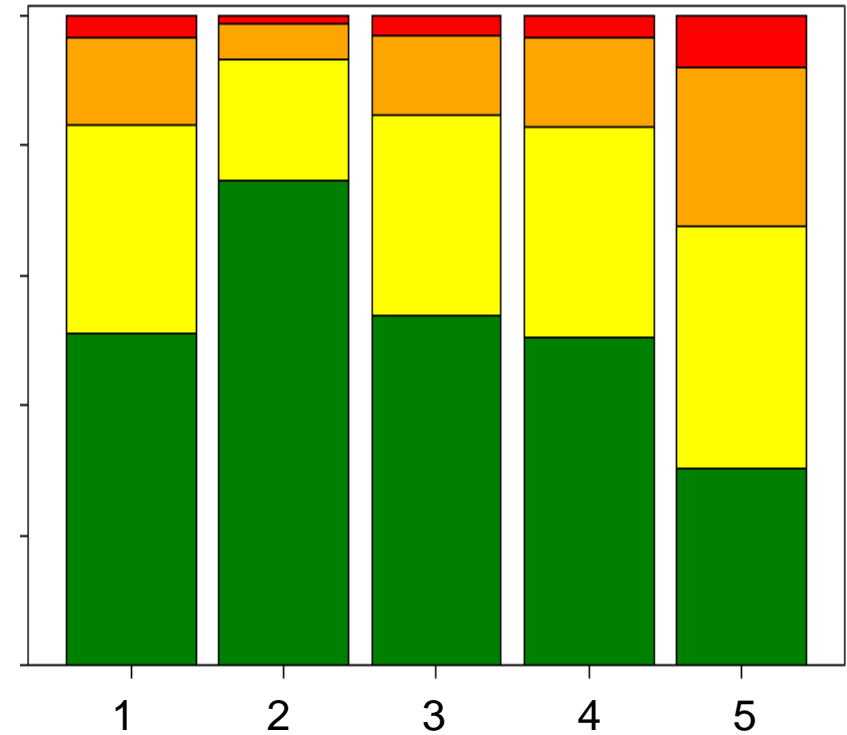
Bite occurrence – Interaction group*batch

Estimated frequencies over 5 batches

Litter-wise groups



Mixed-litter groups



■ No visible damage
■ Moderate damage

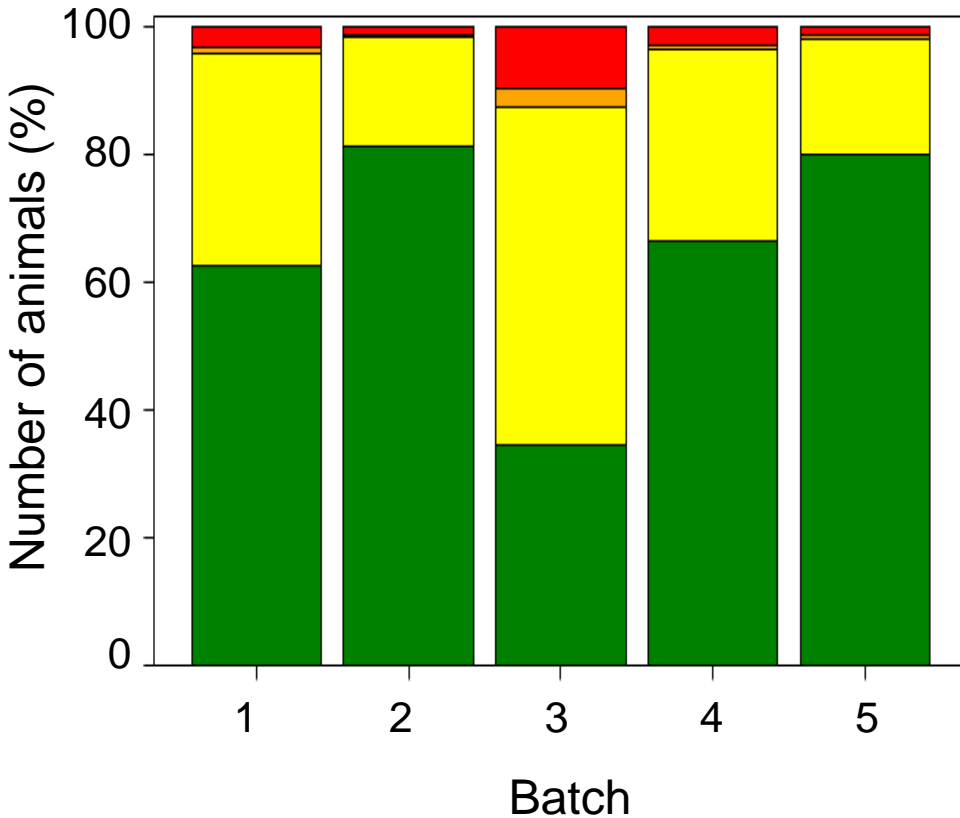
■ Scratches, light bite marks
■ Severe damage



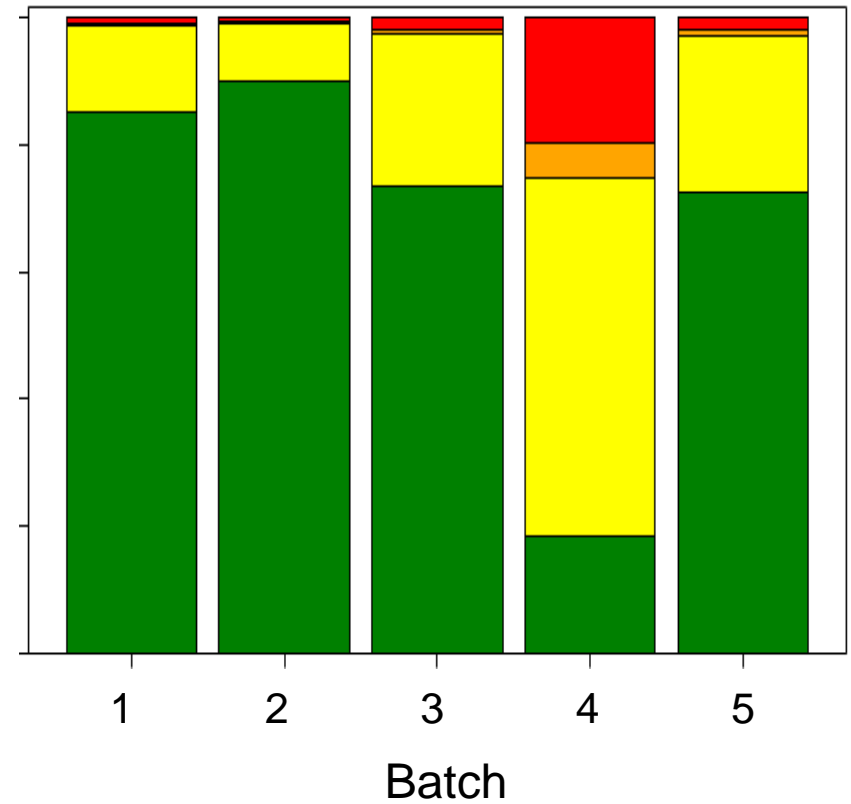
Tail losses – Interaction group*batch

Estimated frequencies over 5 batches at the end of rearing

Litter-wise groups



Mixed-litter groups



■ Original length
■ Partial loss (min. 1/4)

■ Loss of tail tip (max. 1/4)
■ Total loss / Necrosis



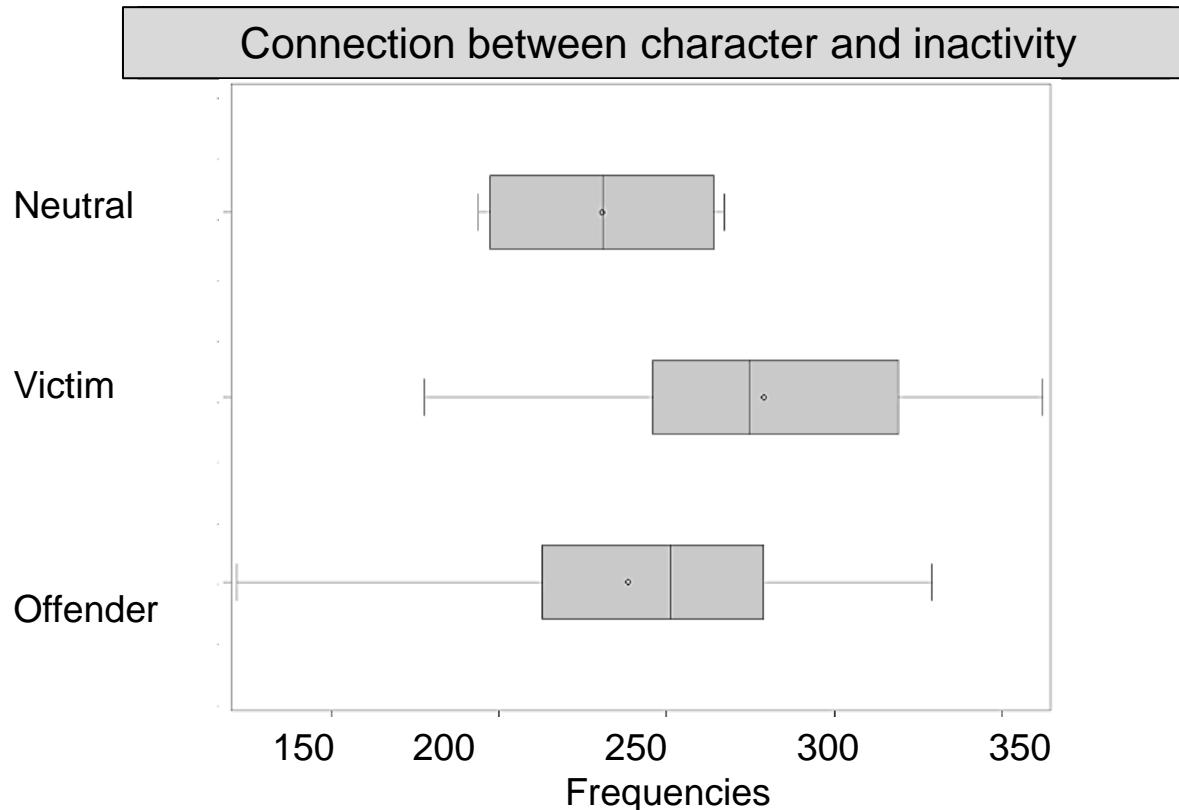
Materials & Methods





Results & Discussion

- Manipulative behavioural patterns reached two to three days prior a scored tail biting outbreak their maximum
- Victims of manipulative behaviour were less active then offenders





Conclusion

- Biting occurrence 2-3 weeks after weaning, tail losses 3-4 weeks after weaning
- The renunciation of mixing after weaning cannot prevent tail biting
- Housing of litter-wise groups can prevent superficial skin lesions in the first days after weaning
- “Real” tail biting outbreaks took place prior scored outbreaks
- Victims of manipulative behavioural patterns are less active than offenders





Thank you for your attention!

Any questions?

