

Tail docking: technical issues

Feedback & discussion

Competent Authority & Policy Meeting
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1. Dust as a risk factor for tail biting

Council Directive 98/58/EC, Annex No. 10

“Air circulation, **dust levels**, temperature, relative air humidity and gas concentrations **must be kept within limits which are not harmful to the animals.**”

- Acceptable level of dust in a pig accommodation?
- Method to assess the level of dust?
- Are other parameters indicating air quality sufficient?



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1. Dust as a risk factor for tail biting

- A member state: national legislation organic dust: 10 mg/m³
- How is it measured?
- No legal thresholds in other countries (based on the three groups)
- Sources of dust: organic enrichment material, bedding, feed, dirt, pigs
- Dust = part of the problem, e.g. inappropriate ventilation

1. Dust as a risk factor for tail biting

Negative effects of dust

- Dust concentrations of 5.1 mg/m³ and higher (9.9) depress performance (live weight & feed intake) Wathes et al. 2004
- Epidemiological study associating air quality with pig health: 28 farms over 12 months, most prevalent problem detected at slaughter: pneumonia & pleuritis → dust, ammonia, carbon dioxide and microbes were found to be positively correlated, recommended concentrations: 2.4 mg/m³ Donham 1991

1. Dust as a risk factor for tail biting

Air quality in general

- Procedures for inspection vary between MS, esp. duration of exceeded concentrations, when to measure air quality (regularly vs. after indication)
- Importance of interaction between parameters of air quality, especially ammonia and dust



1. Dust as a risk factor for tail biting

Workers in poultry husbandry (Donham et al. 2002)

- Pulmonary function testing before & after 4 hours work shift
- Assessment of dust, ammonia, endotoxin and CO₂
- Ammonia × airborne dust explained up to 63% of decline in function test parameters (e.g. forced expiratory volume)
- Importance of lowering concentrations

2. Diet or feeding strategies

Council Directive 98/58/EC, Annex No. 14

“...**wholesome** diet which is **appropriate** to their age...fed to them in **sufficient quantity** to **maintain them in good health** and **satisfy their nutritional needs.**”

- Suitability of body and coat condition?
- Alternatives to body condition?
- Consideration of access vs. quality/composition
- Consideration of feeding strategies

2. Diet or feeding strategies

Access to feed/competition

- Council Directive 2008/120/EC: all pigs must be able to access feed at the same time if fed restrictively on group level → how?
- Number of feeders (drinkers) per pig → regulated in some MS
- Feeding space → regulated in some MS (different formula)
Importance of different preventive measures for tail biting, Finish farmers ranked enough feeder space to be the most important (Valros et al. 2016)
- Resource-based indicators
- Would be helpful if specifications of feeding space and animal-feeding place ratio would be harmonized across MS (+ for drinker too)

2. Diet or feeding strategies

Access to feed/competition

- Most aggression seems to occur during feeding (Ewbank and Meese 1971, Ewbank and Bryant 1972)
- 30-50% of tail biting occurred in the vicinity of the feeder (Sutherland et al. 2009, Palander et al. 2012) → might reflect stress and frustration associated with feeding competition
- Aggression & skin lesions → Animal-based indicators
- But in context of inspection: time needed, difficulty to perform in standardized & repeatable way

2. Diet or feeding strategies

Access to feed/competition and/or quality?

Body condition

- Differences in body condition/heterogenous weight in pen → 'too late'
- Inspectors focused on problems rather than prevention, i.e. body condition might be 'good enough'
- 'Rough measure'
- Not specific (e.g. health issues)



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2. Diet or feeding strategies

The screenshot shows the EURCAW Pigs logo and the text 'European Reference Centre for Animal Welfare Pigs'. Below this is a pink header bar with the text 'Indicator factsheet - Risks for tail biting' and a 'Diet' icon. A purple bar below that contains the text 'Body condition'. The main image shows several white pigs in a pen. A small '© WUR' watermark is visible in the bottom left corner of the image.

<https://www.eurcaw.eu/en/eurcaw-pigs/dossiers/tail-biting-and-tail-docking/welfare-indicators.htm>

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2. Diet or feeding strategies

 European Reference Centre
for Animal Welfare *Pigs*

Indicator factsheet – Risks for tail biting Competition

Skin lesions 

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<https://www.eurcaw.eu/en/eurcaw-pigs/dossiers/tail-biting-and-tail-docking/welfare-indicators.htm>

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2. Diet or feeding strategies



European Reference Centre
for Animal Welfare *Pigs*

Indicator factsheet - Risks for tail biting

Diet/competition

Permanent access to water



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<https://www.eurcaw.eu/en/eurcaw-pigs/dossiers/tail-biting-and-tail-docking/welfare-indicators.htm>

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2. Diet or feeding strategies

Mycotoxins

- Issue in some MS
- Hypothesized to be associated to tail biting
- Importance of feed storage
- One MS sponsors 'mycotoxin blocker' in feed
- Keeping feed samples to analyse if a problem appears

3. Ear biting

Council Directive 2008/120/EC, Annex I, chapter I, No. 8

“Neither **tail-docking** nor reduction of corner teeth must be carried out routinely but **only where there is evidence that injuries** to sows’ teats or **to other pigs’ ears or tails have occurred.**”

- Etiology?
- Possible preventive/mitigating measures?



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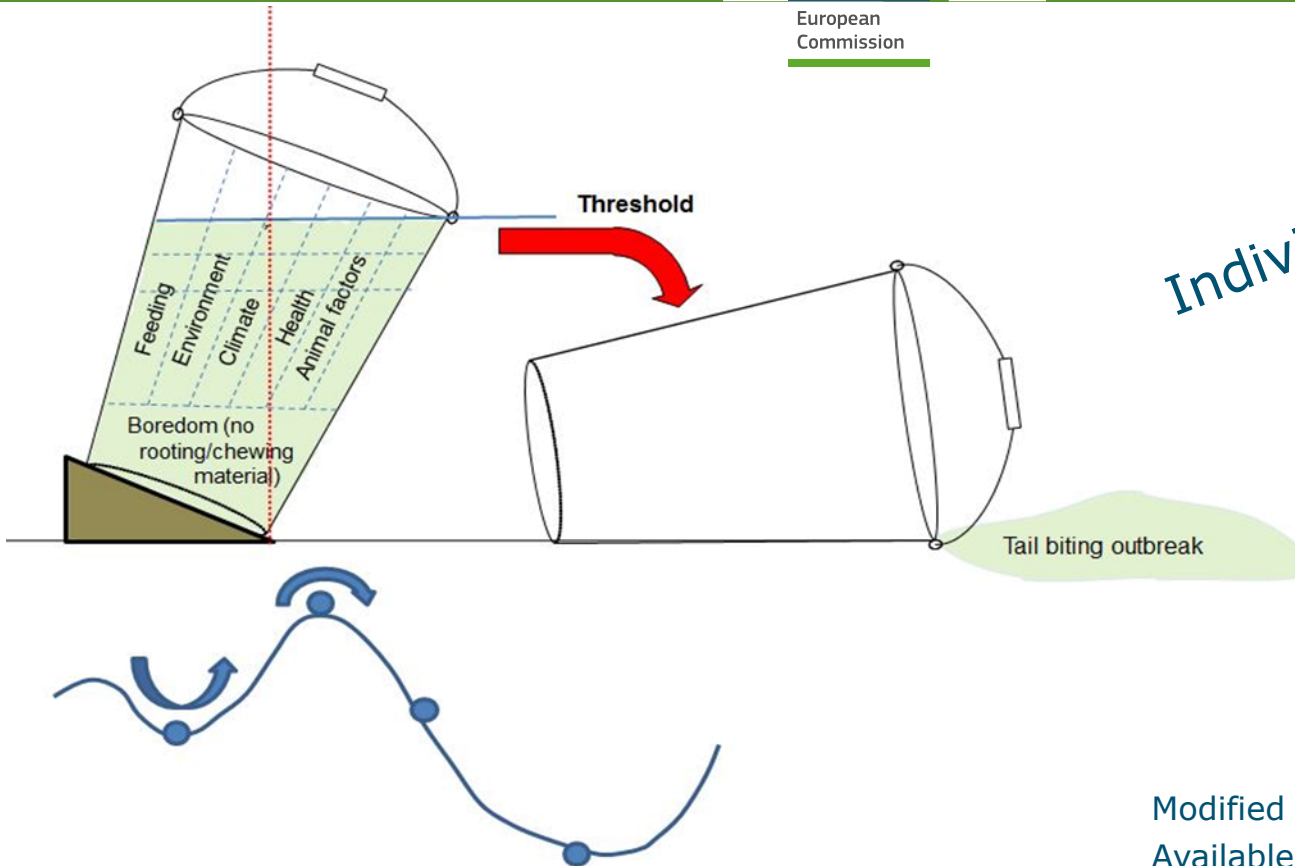
3. Ear biting

Etiology

- Risk factors for ear and tail biting seem to be similar (Smulders et al. 2008)
- One MS starts collecting slaughterhouse data on ear lesions



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Individual approaches

Modified by: Bracke et al. (2012)
Available: <http://edepot.wur.nl/220045>

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