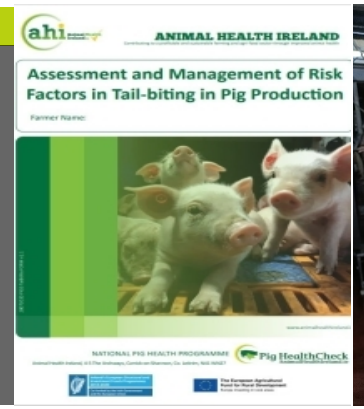
Validation of Animal Health Ireland's Tail Biting Risk Assessment Tool



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Introduction

Commission Recommendation (EU) 2016/336

- Farmers carry out a risk assessment of the incidence of tail-biting
- 'THE RISK ASSESSMENT': based on animal and non-animal based indicators

9 Risk assessments developed

→ 3 Scientifically Validated

- AHDB Tail biting WebHAT (UK; Taylor et al.,2012)
- SchwIP (Germany; Madey et al., 2014)
- Assessment and Management of Risk Factors in Tail-biting in Pig Production (Ireland; D'Alessio et al., in process)

Hypothesis

The level of risk determined by the tool, would be reflected in skin tail lesion scores recorded at the slaughterhouse

Dippel, Sabine (Hg.) (2022): Inventory for tail biting risk assessment and pig observations. OpenAgrar-Repository: Friedrich-Loeffler-Institut. Online unter: https://www.openagrar.de/receive/openagrar_mods_00079625.

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The risk assessment tool

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

+

ahi Animal Health Ireland.ie

Trained Vets

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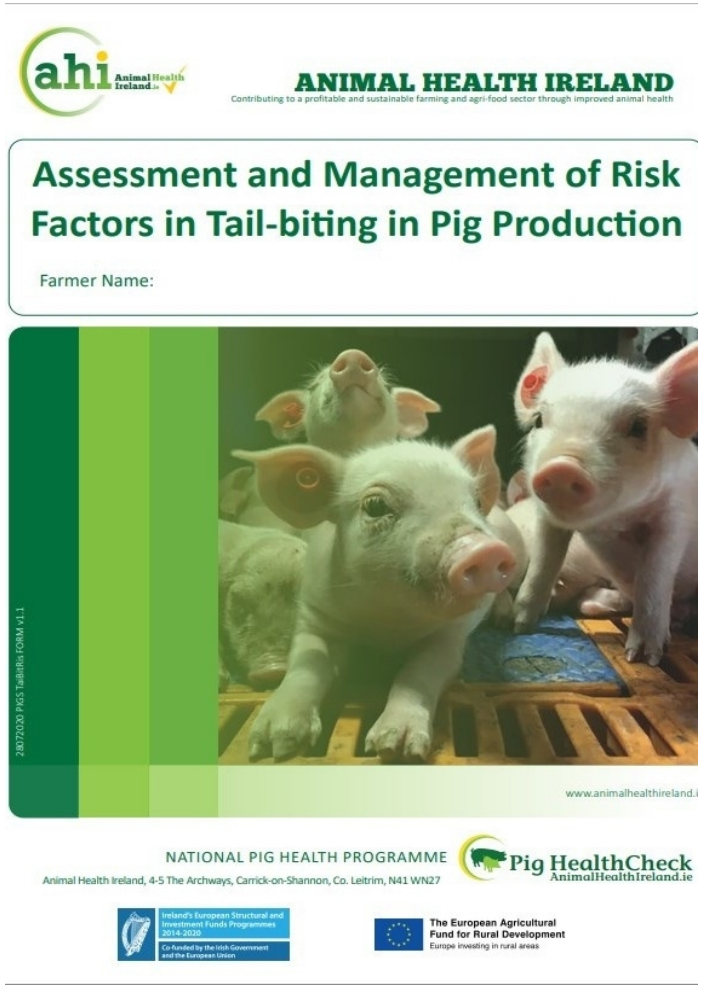

Non-Animal based

- **Farm management**
  (pen size, floor type, vaccination schedule…)
- **Enrichment provision**
  (Type and number)

Animal based

- **Behavioural scoring**
  (5 min/pen; aggressive, damaging, explorative behaviour)
- **Physical Condition**
  (tail lesions, dirty flanks)

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Risk category

Veterinary opinion on measures associated with tail biting risk for this pen	
Risk Category	**Risk value**
Environmental Enrichment provision represents no risk for tail biting	
There is adequate thermal comfort and air quality for these pigs	
The health of these pigs provides no risk of tail biting	
Competition issues for the pigs in this pen do not give rise to risks for tail biting	
The pen design and use for these pigs does not present risk for tail biting	
Feeding processes for these pigs do not contribute to risks for tail biting for these pigs	

Risk 0: Risk not Observed

Risk 1: Minimum risk of tail biting

Risk 2: Higher risk of tail biting

Based on your observations of behaviours and body lesions observed in this pen is there a risk of tail biting for these pigs?	Yes	×
	No	

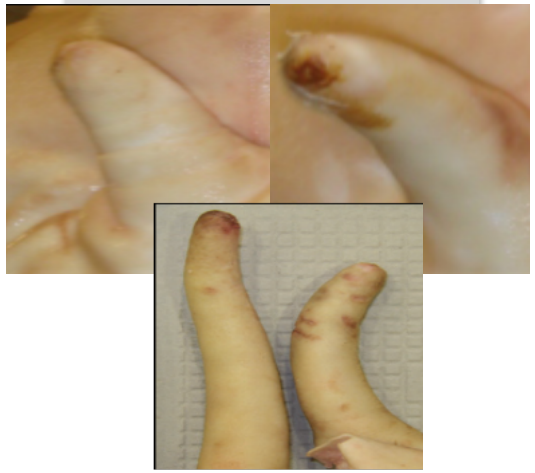
- 6 Pens per farms

✓ 27 Farms → 158 pens → 6371 pigs

Tail lesions

Post-mortem examination

MINOR



MODERATE

SEVERE

Severe tail loss with healing

- 7197 pig carcases
- Visual examination only

D'Alessio, RM, McAloon, CG, Boyle, LA, Hanlon, A, O'Driscoll, K. Comparison between two scoring methods to assess tail damage of docked pig carcasses during postmortem inspection in Ireland. Vet Rec Open. 2023; 10:e66. https://doi.org/10.1002/vro2.66

Statistical analysis

v9.4

- DESCRIPTIVE STATISTICS
  - Risk category
  - Level of tail skin lesion at post-mortem

- PROC MIXED:
  - Relationship Animal-based indicators / risk of tail biting
  - Association risk of tail-biting / the tail condition at post mortem

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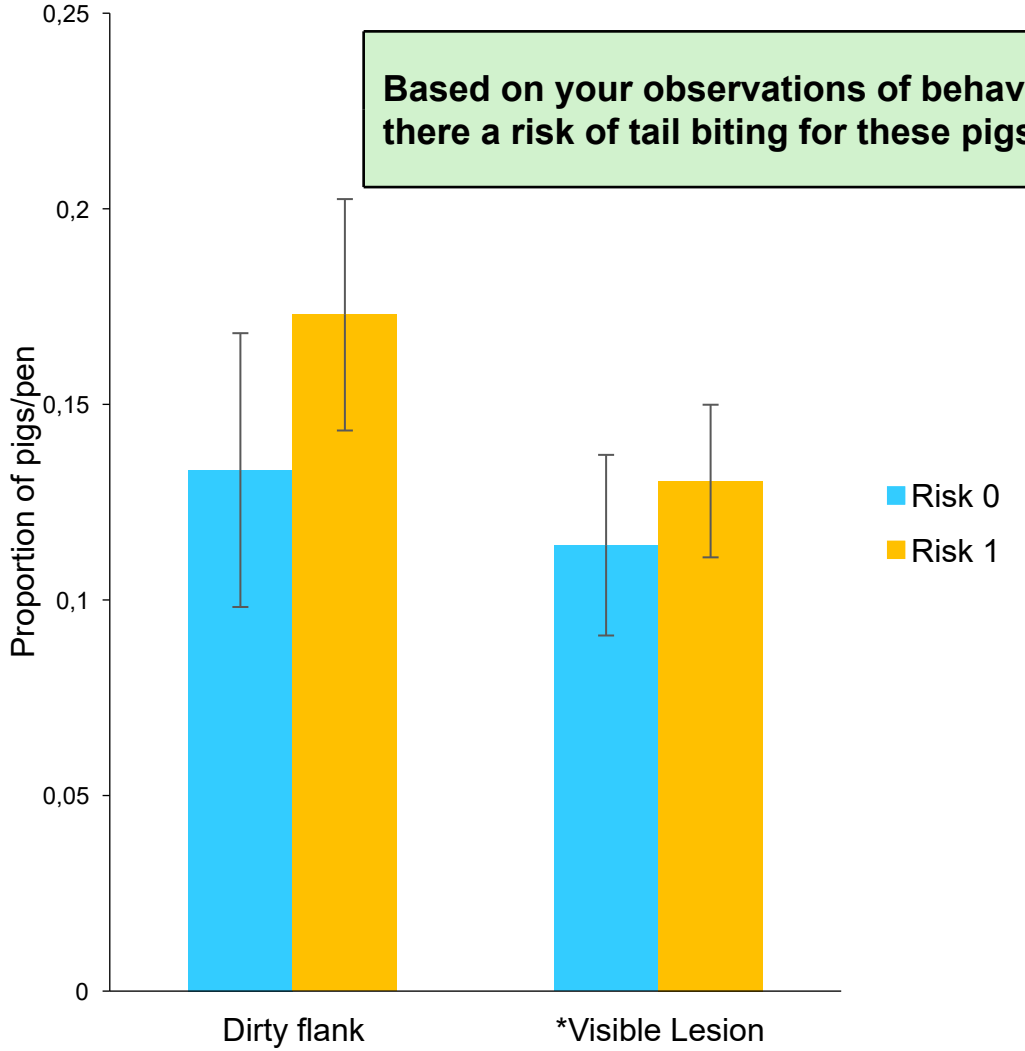
Risk Category

	Enrichment	Thermal comfort	Health	Competition	Pen design	Feeding system
No Risk	4%	5%	9%	1%	5%	9%
Minimum Risk	9%	**84%**	**76%**	**84%**	**87%**	**79%**
Major Risk	**87%**	11%	15%	15%	8%	12%

- The risk levels assigned by the PVPs ≠ information reported in the risk assessment
- Low number of factors that are included in the tool limits its usefulness?

Physical measures and risk of tail biting

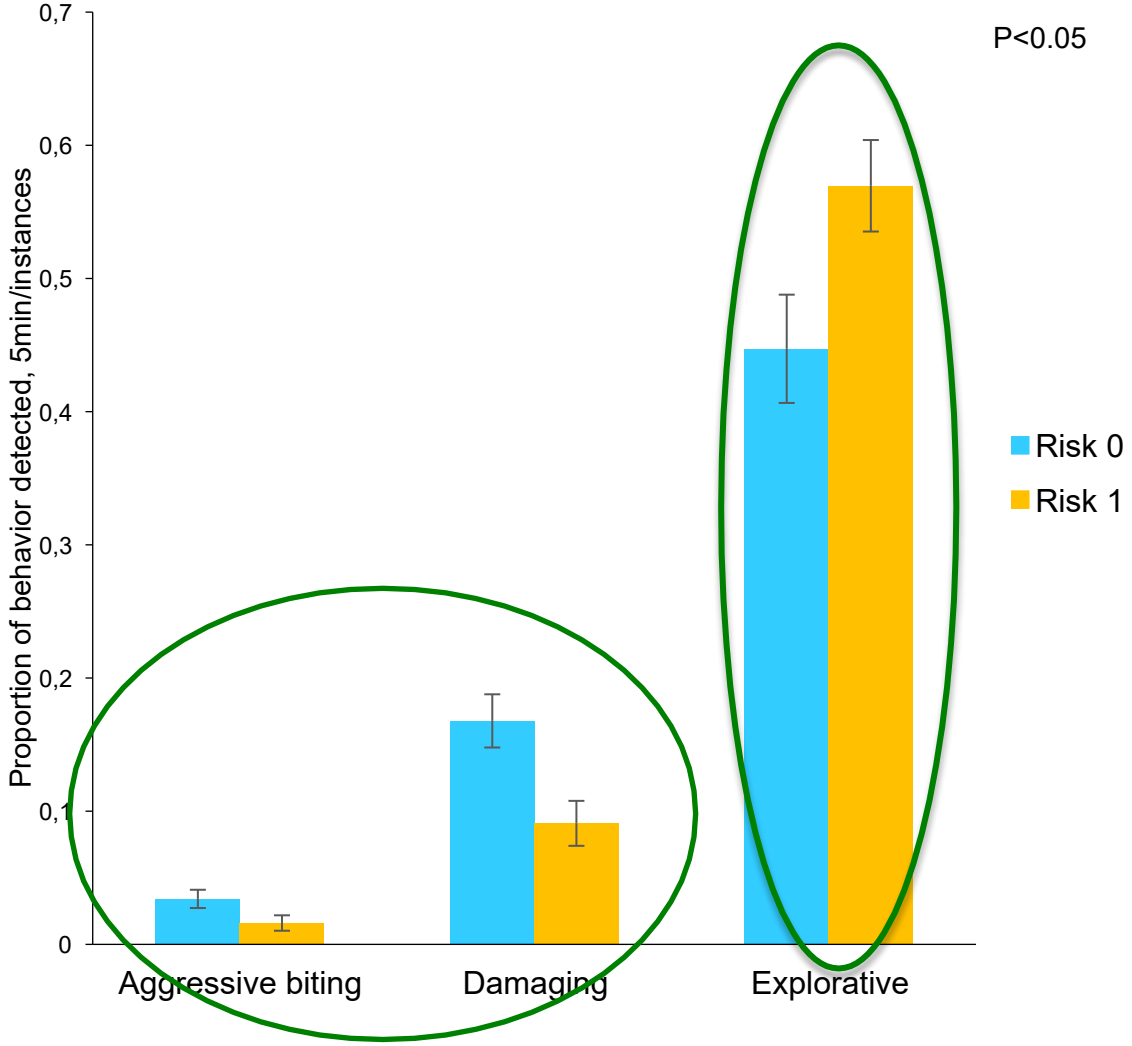


Based on your observations of behaviours and body lesions observed in this pen is there a risk of tail biting for these pigs?	Yes	
	No	

- Detecting body lesions from outside the pen can be difficult?

*Visible Lesion = Injured tails + Ears + Flank Lesions + Aggression lesions

Behaviour observations and risk of tail biting



- The inexperience of the assessors with behaviour observations => Potential barrier to assigning an appropriate level of risk

- The time limit between visits may impede assessors to gain experience on conducting behavioural observations

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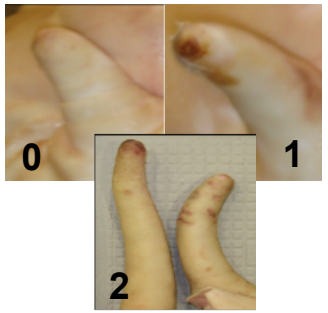
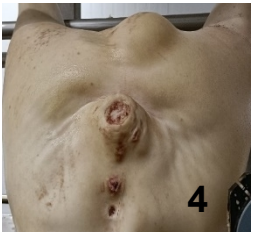
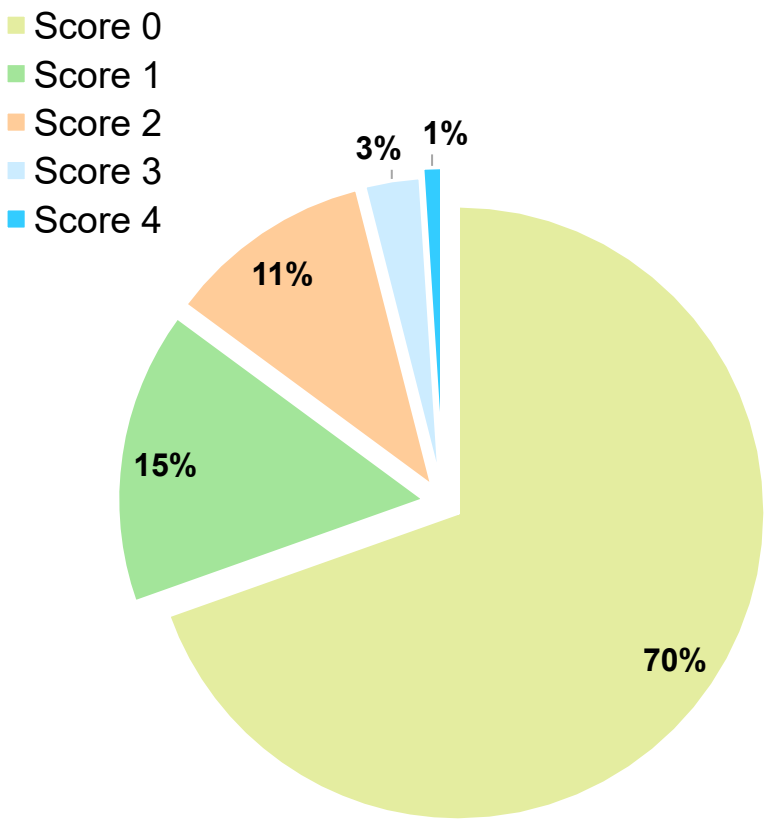
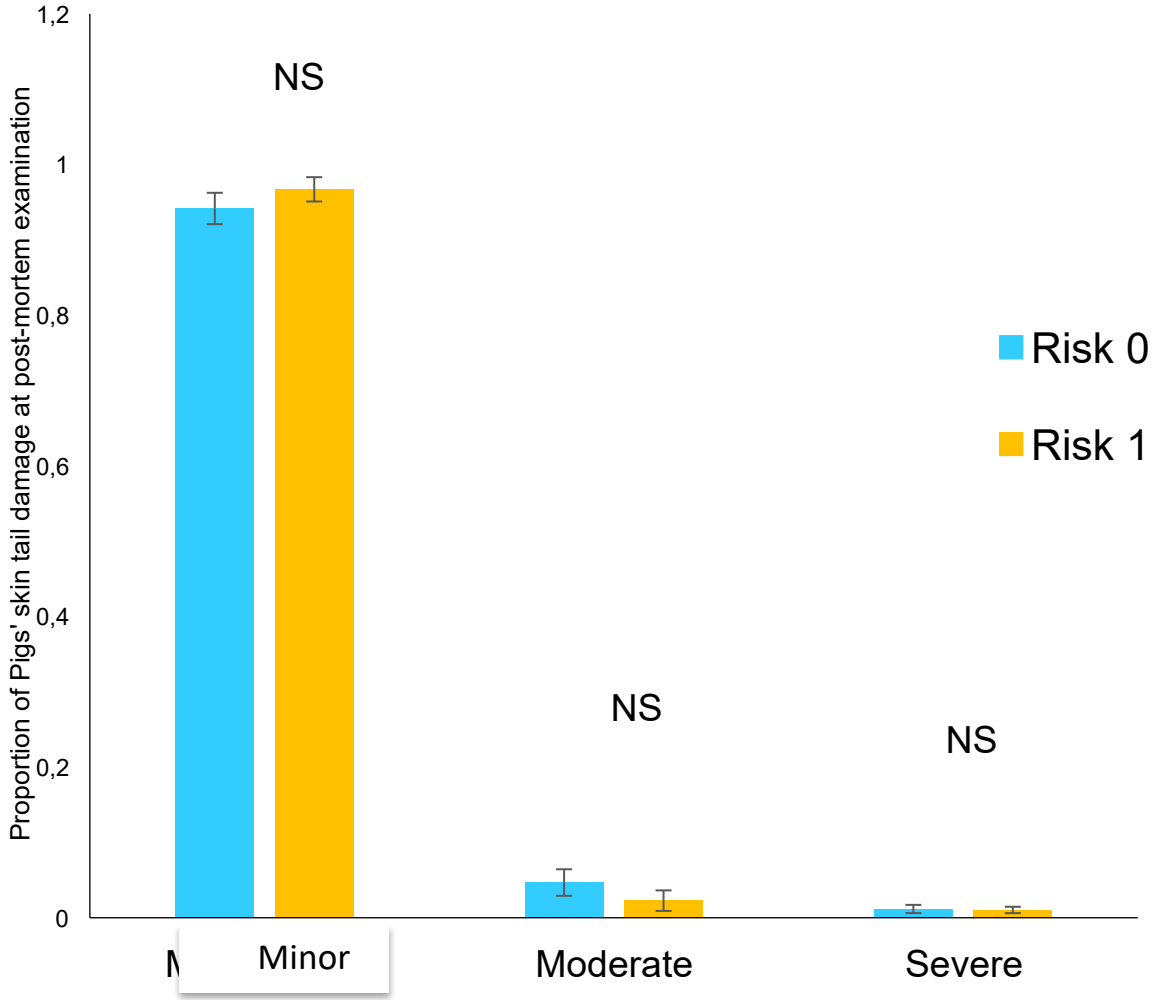
Association between the risk of tail biting and tail condition post-mortem









- Is it easier to detect tail skin lesions at post-mortem?

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Conclusion

- ✓ The tail-biting risk assessment tool developed for commercial pig farms in Ireland yielded poor results in terms of identifying risks for tail biting. However, it did identify important deficiencies in management.

- ✓ The assessors opinion on tail-biting risk did not reflect what they observed during the pen assessment, nor did the risk level assigned to pens associate with farm tail lesion prevalence at the post-mortem examination

- ✓ Despite political effort to reduce it, Irish farmers still primarily rely tail docking to help reduce the risk of tail-biting

Thank you for listening

Acknowledgements

- PigNoDock (0842) project

WALSH SCHOLARSHIPS PROGRAMME

- Animal health Ireland (AHI)
- Farmers
- Slaughterhouses

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