meatquality.eu

mEAT quality

On-farm animal welfare assessment in slaughter pigs across different production systems in four European countries

Corresponding author: Mona Lilian Vestbjerg Larsen (mona@anivet.au.dk)

Presenting author: Lene Juul Pedersen (lene.juulpedersen@anivet.au.dk)

Co-author: Tine Rousing (tine.rousing@anivet.au.dk)

Funded by the European Union

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No101000344. It reflects only the author's view and that the European Commission is not responsible for any use that may be made of the information it contains.

AARHUS UNIVERSITY

DEPARTMENT OF ANIMAL AND VETERINARY SCIENCES

Overall project aim

Applying extensive husbandry practices to improve the intrinsic and extrinsic quality of pork and broiler meat

Extensive practices for **pigs**:

- Quantity of space: space allowance
- Quality of space: enrichment
- Roughage
- Breeds

Funded by
the European Union

Subtask on pig welfare

- Describe variation in animal welfare indicators across different levels of intensive and extensive production

- Slaughter pigs (30 kg until slaughter)
- 80 herds in total
- **20 Danish, 20 Polish, 20 Italian and 20 Spanish herds**

Funded by
the European Union

Five herd categories: increasing extensification

Intensive indoor: conventional, N=30

Intensive outdoor run: conventional, N=6

Intensive outdoor run: organic, N=12

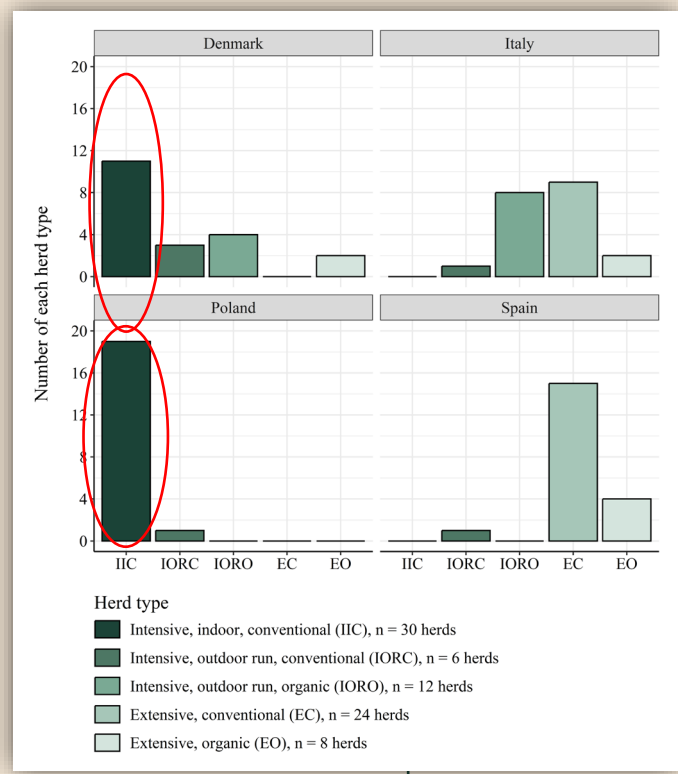
Extensive outdoor pasture: conventional, N=24

Extensive outdoor pasture: organic, N=8

Funded by
the European Union

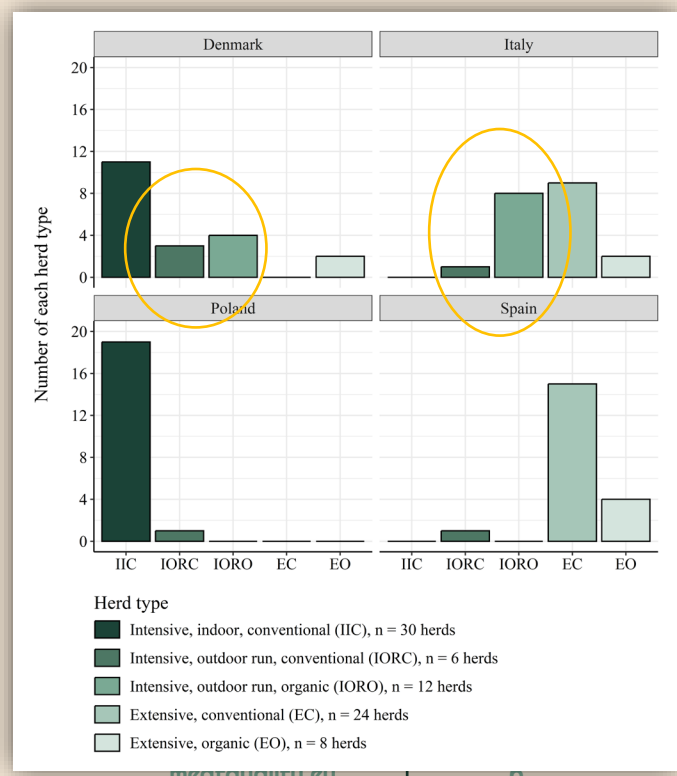
Intensive indoor: conventional

mEAT quality



Funded by the European Union

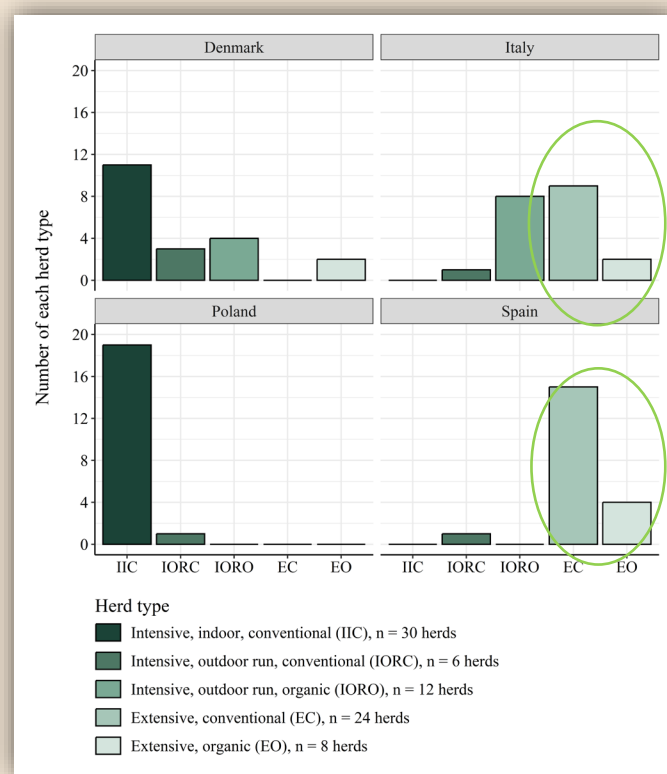
Intensive with outdoor run: conventional and organic



Funded by
the European Union

Extensive on pasture: conventional and organic

mEAT quality



Methods of on-farm registrations

mEAT quality

Adjusted the welfare assessment protocol from WQ

Trained and calibrated assessors from each country

Farm visits:

Interview with the farmer about management, and ressources

On farm registration of welfare indicators of 4 pens/flocks *(~100 pigs)*

- Human avoidance test (behaviour observation)
- Quick behaviour scan (posture, manipulation, resting, panting,shivering, stereotypies)
- 10 min continuous behaviour observations (mounting, play and aggression)
- Clinical health examination
- Pen resources (space, bedding, dirtiness, rooting material, feeders and drinkers)

Funded by the European Union

RESULTs
Preliminary and exploratory analysis from the welfare assessment on the 80 pig farms

Funded by
the European Union

RESULTS

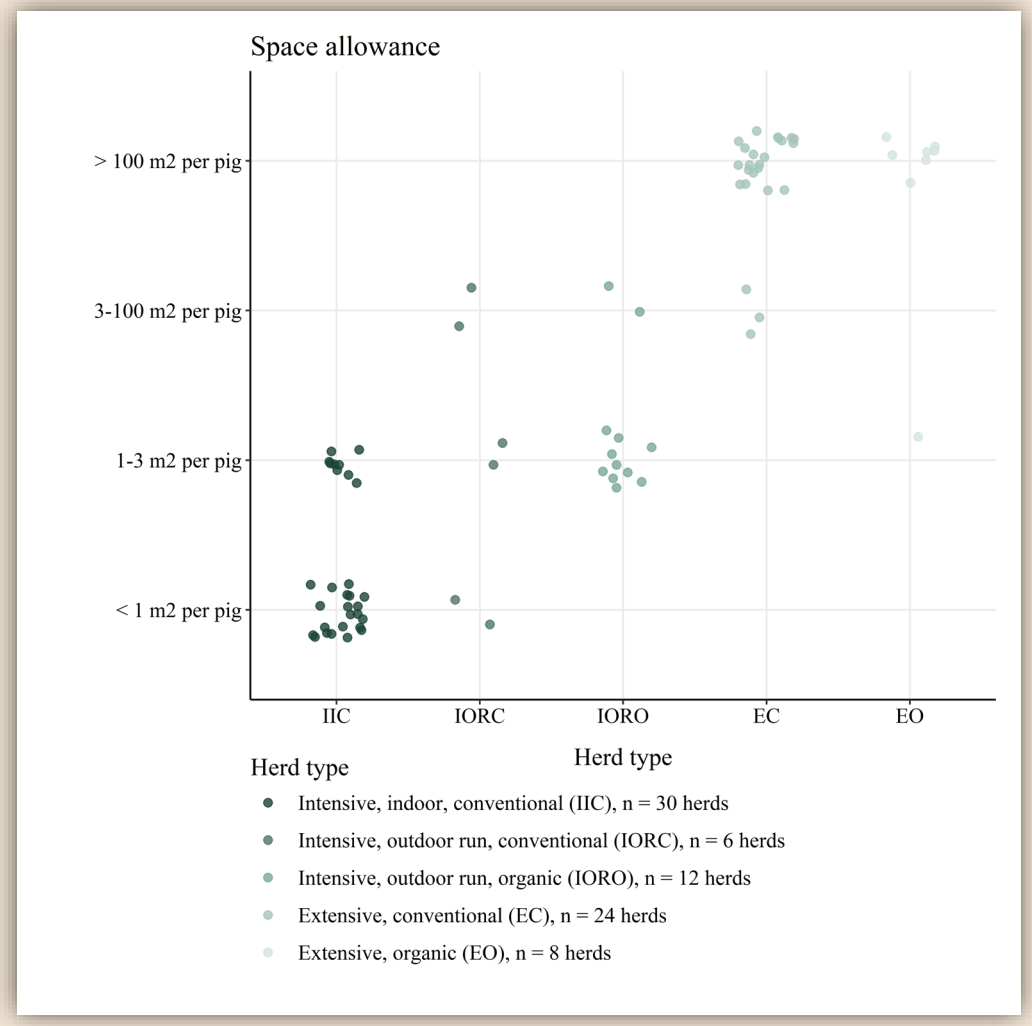
How did ressource-based indicators vary across and within herd type?

Funded by
the European Union

Space allowance

Large variation both within intensive and the extensive farms

Space clearly increased with herd type of increasing extensification

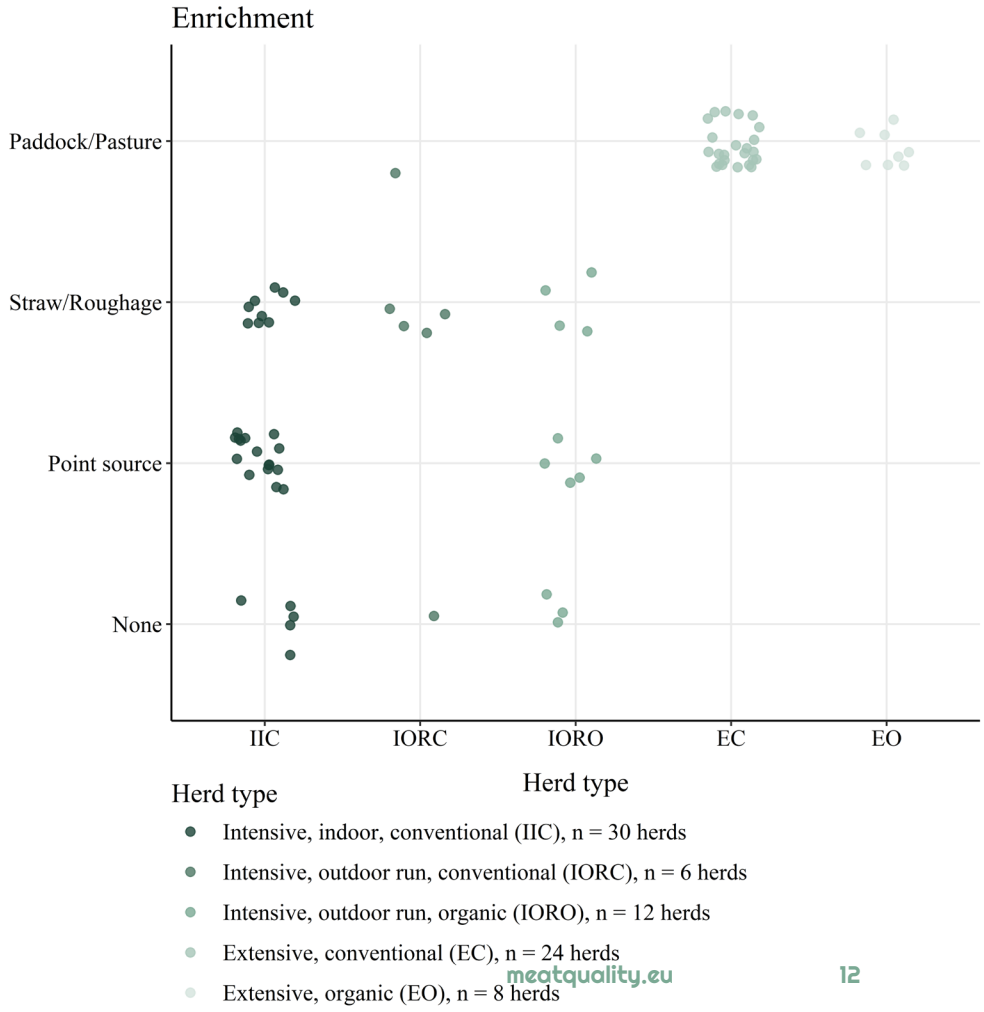


Funded by
the European Union

Enrichment

Large variation within intensive farms

Quality of enrichment tended to increase with herd type of increasing extensification.

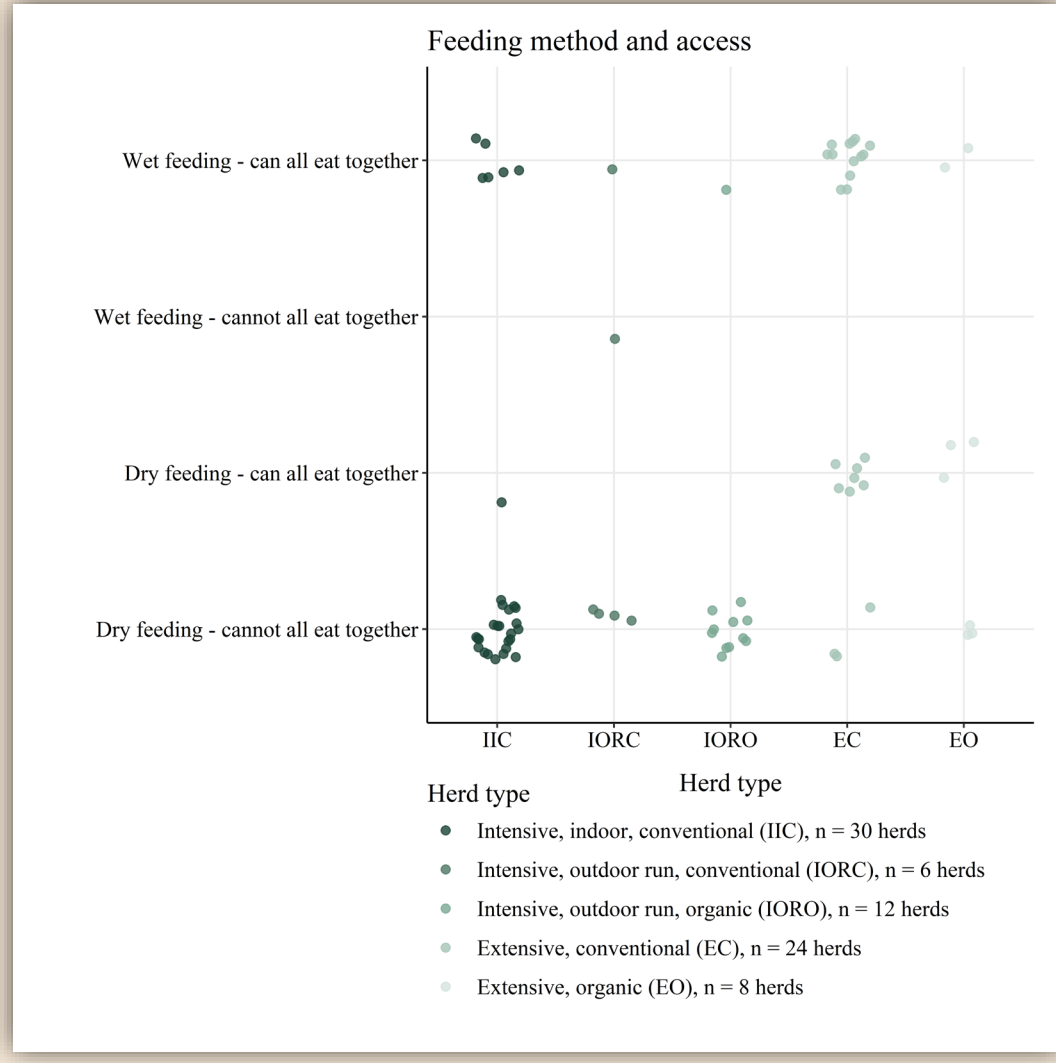


Funded by the European Union

Feeding methods

Two type of feeding methods dominated

No clear pattern in feeding method over herd type of increasing extensification.



Funded by
the European Union

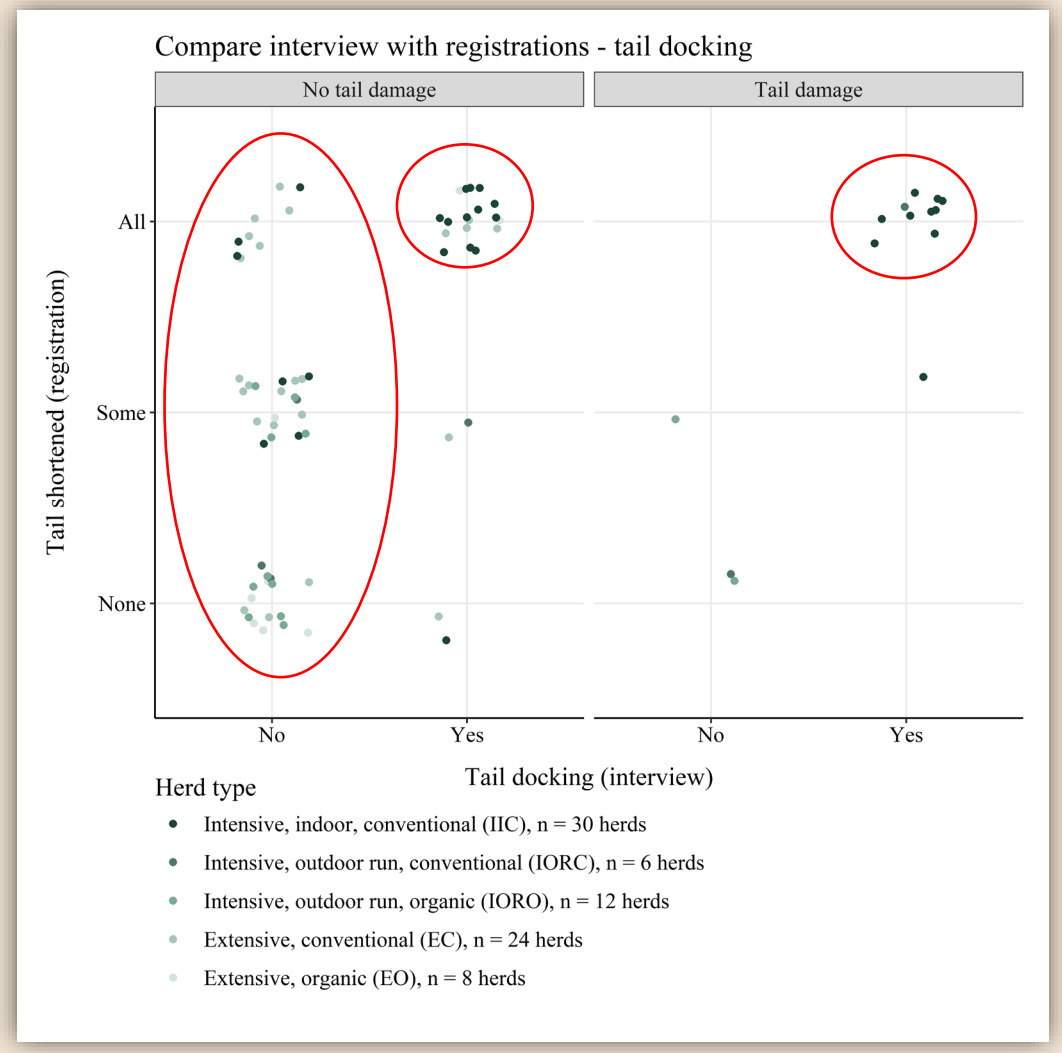
RESULTS- animal based indicators across herd types

Tail docking and tail biting across herd type

Funded by
the European Union

Majority of intensive indoor farms tail docked – but not all

Majority of extensive farms did not tail dock AND had pigs without tail damage – but not all



RESULTS

Relationship between extensification factors and tail damage:

Quantity of space

Quality of space

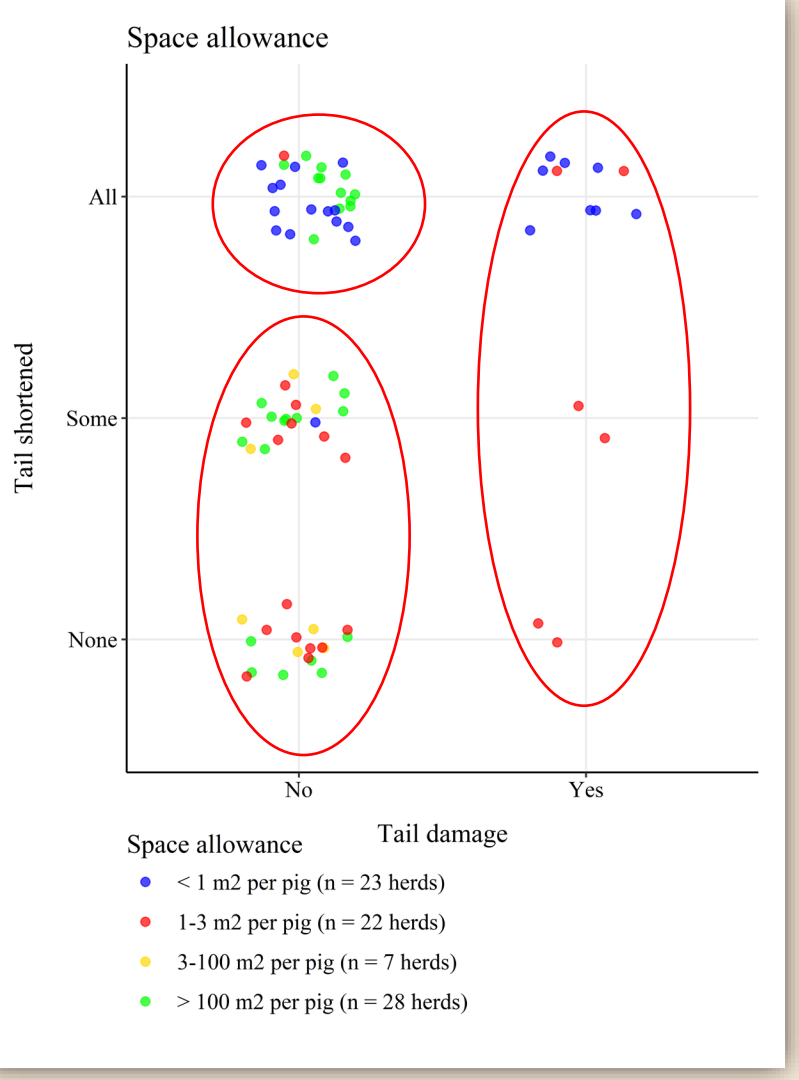
Funded by
the European Union

Quantity of space and tail damage

All herds recorded with tail damage had < 3 m^2 per pig

Herds without tail damage and tails not docked had > 1 m^2 per pig

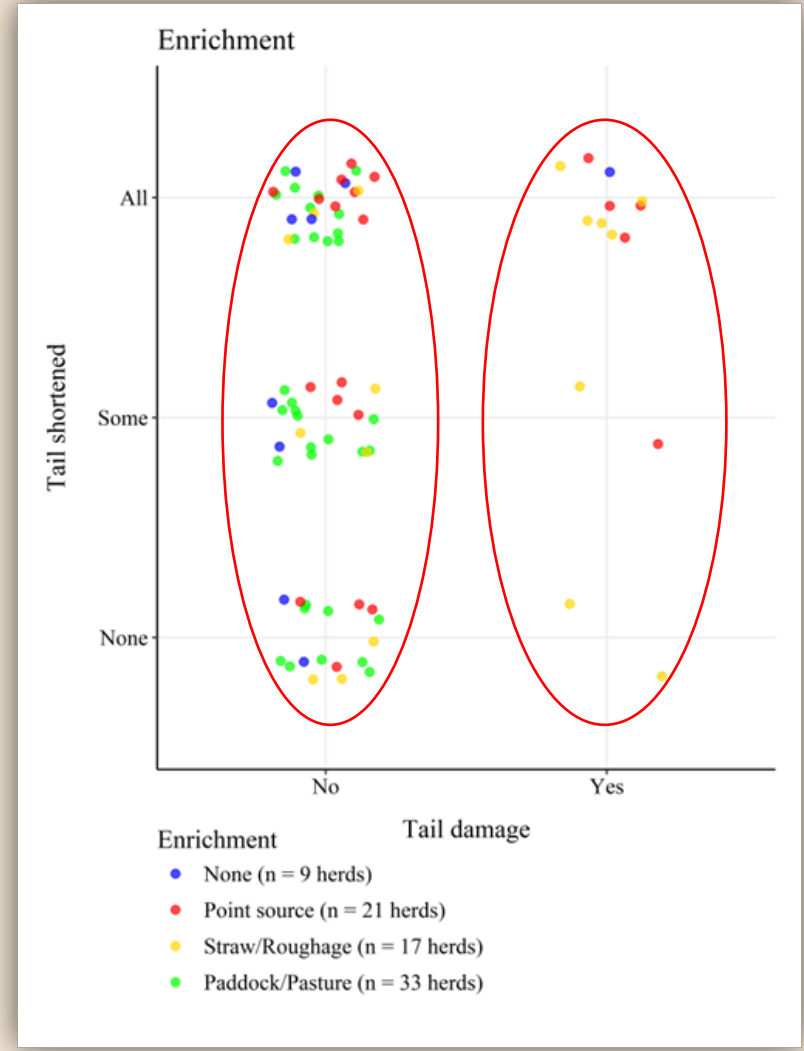
Many herds with no tail damage and all tails shortend have >100 m^2 – why ?



Quality of space (enrichment) and tail damage

Herds recorded with tail damage had either none, point enrichment or straw/roughage

No herds with paddock access had tail damage – but some had pigs with shortend tails



Funded by
the European Union

Whats next to do .....

We will explore futher

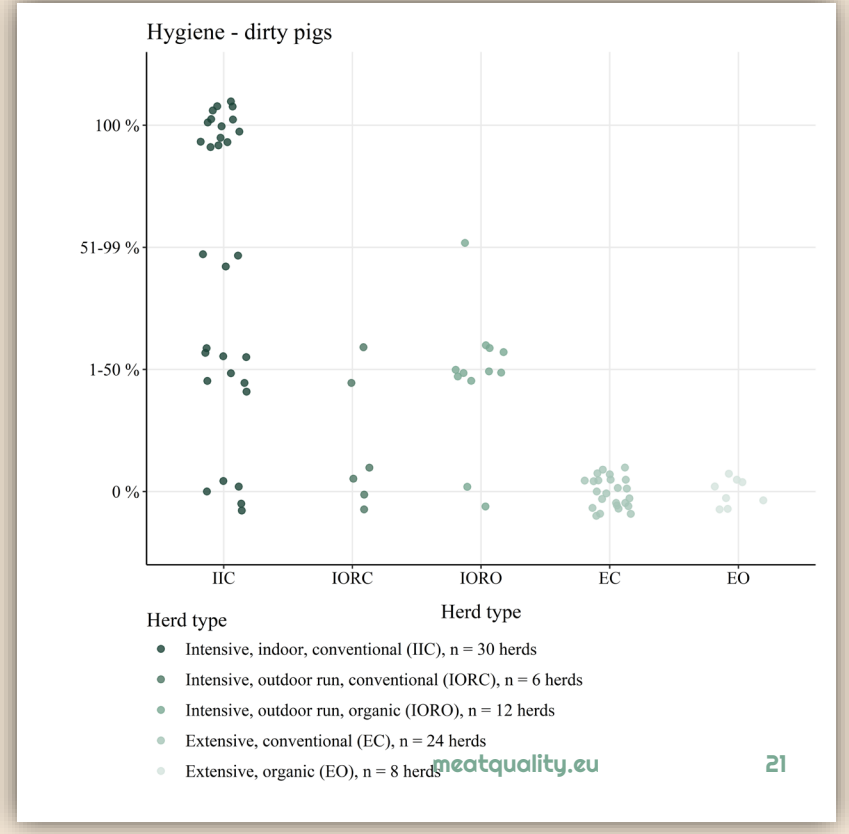
- Variability in more welfare indicators within herd type – e.g. dirty pigs, lesions....
- Relation between herd type and other animal based welfare indicators
- Relation between extensification factors and other animal based welfare indicators

Funded by
the European Union


Thank you for listening
QUESTIONS ?

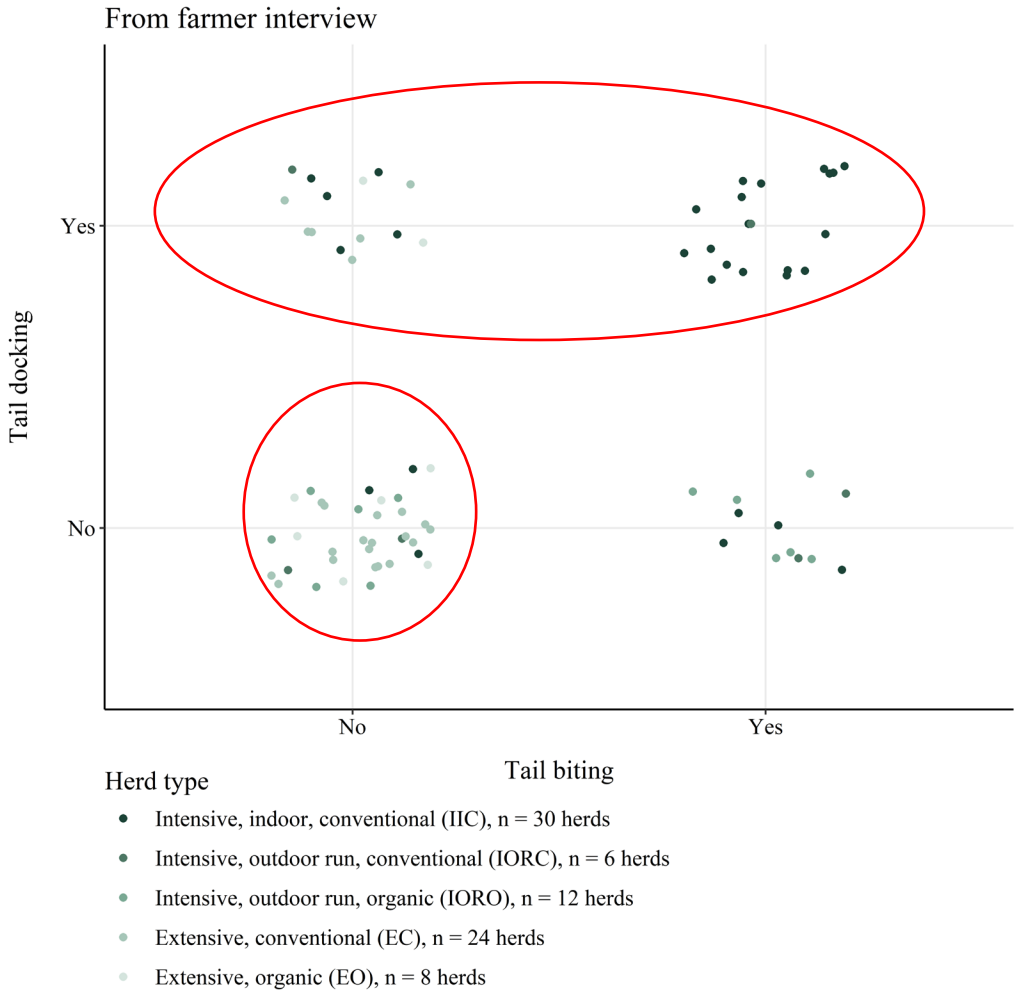
Hygiene - dirty pigs

Pigs' dirtyness decreased with categories of increasing extensification.



Funded by
the European Union

Majority of intensive farms tail dock
Most extensive farms do not tail dock AND manage to keep tails intact



Funded by
the European Union