



SCIENCE AND
EDUCATION **FOR**
SUSTAINABLE
LIFE

Associations between straw provision, behaviour, ear and tail lesions in undocked pigs

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Detection

Prevention

Tail biting

Exploratory behaviour

Production

Welfare



Reduce impact



Improve welfare

Detection of tail biting

Minimize production loss



How to detect tail biting?







Month: _____ Pen: _____ Treatment: _____
 Farm: _____ Time for straw: _____



| DATE | LEFT OVER STRAW | NO STRAW | CLEANED PEN/THROUGH | TAIL BITING | OTHER |
|------|-----------------|----------|---------------------|-------------|-------|
| 3 | | | | | |
| 10 | | | | | |
| 15 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |
| 26 | | | | | |
| 27 | | | | | |
| 28 | | | | | |
| 29 | | | | | |

Management



1 dl straw spread in a clean empty pen.
Score 0: less than 1 dl straw

1 litre straw spread in a clean empty pen.
Score 1: Between 1 dl and 1 l straw

10 litres straw spread in a clean empty pen.
Score 2: Between 1 l and 10 l straw
Score 3: More than 10 l straw

Straw



1 dl straw spread clean empty pen.
Score 0: less than dl straw



1 litre straw spread in a clean empty pen.
Score 1: Between 1 dl and 1 l straw



10 litres straw spread in a clean empty pen.
Score 2: Between 1 l and 10 l straw
Score 3: More than 10 l straw



Straw

Length (0-2) Damage (0-4) Freshness (0-4)

Moving in to stable



Every day



Every second week



First pig sent to slaughter



Lesions

Tail
Ear

How to detect tail biting?

| | | |
|---|---|------------------------------|
| <p>1 dl straw spread in a clean empty pen. Score 0: less than 1 dl straw</p> |  | <h1>Straw</h1> <p>Amount</p> |
| <p>1 litre straw spread in a clean empty pen. Score 1: Between 1 dl and 1 l straw</p> |  | |
| <p>10 litres straw spread in a clean empty pen. Score 2: Between 1 l and 10 l straw Score 3: More than 10 l straw</p> |  | |



Behaviour

Straw directed
Pig directed
Pen directed

Main results



| | Tail Length | Tail Damage | Ear Damage | Active Perc | Straw Directed Behaviour | Pig Directed Behaviour | Pen Directed Behaviour | Beh LOS | LOS |
|--------------------------|-------------|----------------|---------------|--------------|--------------------------|------------------------|------------------------|--------------|-----|
| Tail Length | | | | | | | | | |
| Tail Damage | | | | | | | | | |
| Ear Damage | | 0,42 | | | Growers | | | | |
| Active perc | | | 0,65 0,60 | | | | | | |
| Straw Directed behaviour | -0,27 | -0,45 -0,39 | -0,68 | 0,33 | | | | | |
| Pig Directed behaviour | | 0,46 0,34 | 0,59 0,56 | 0,80 | -0,60 | | | | |
| Pen Directed behaviour | | 0,35 | 0,23 0,67 | 0,63 0,52 | -0,34 | 0,64 | | | |
| Beh LOS | 0,31 | | -0,42 0,41 | 0,66 | 0,55 | 0,52 -0,37 | 0,32 | | |
| LOS | 0,40 | | 0,60 | 0,57 | | 0,51 | -0,50 0,61 | 0,66 0,51 | |

Growers

| | D0 | D1 | D2 | D3 | D4 |
|--------------------------|-------|-------|-------|-------|----|
| Ear Damage | 0,30 | -0,30 | -0,29 | -0,26 | |
| Active perc | -0,16 | | | | |
| Straw Directed behaviour | | | | | |
| Pig Directed behaviour | -0,33 | 0,38 | 0,31 | | |
| Pen Directed behaviour | -0,32 | | 0,17 | | |



| | Tail Length | Tail Damage | Ear Damage | Active Perc | Straw Directed Behaviour | Pig Directed Behaviour | Pen Directed Behaviour | Beh LOS | LOS |
|--------------------------|-------------|------------------------|-------------------------|-------------|--------------------------|------------------------|------------------------|----------------------|-----|
| Tail Length | | | | | | | | | |
| Tail Damage | 0,38 | | | | | | | | |
| Ear Damage | | 0,51 0,42 0,55 | | | Finishers | | | | |
| Active perc | | -0,45 | -0,37 0,23 | | | | | | |
| Straw Directed behaviour | | -0,31 -0,32 0,25 | -0,30 0,44 | 0,29 | | | | | |
| Pig Directed behaviour | | | | 0,37 | -0,38 | | | | |
| Pen Directed behaviour | | | 0,33 0,29 | | 0,25 0,37 | -0,37 | | | |
| Beh LOS | -0,22 | -0,37 -0,44 | -0,26 -0,34 | 0,25 | 0,56 0,25 | 0,42 | 0,29 -0,33 -0,36 | | |
| LOS | -0,33 | -0,64 -0,53 | -0,54- 0,63 -0,48 | 0,53 | 0,33 0,33 | 0,40 | | 0,55 0,25 0,53 | |

Finishers

| | D0 | D1 | D2 | D3 | D4 |
|--------------------------|-------|-------|-------|-------|----|
| Ear damage | 0,30 | -0,30 | -0,29 | -0,26 | |
| Active perc | | 0,12 | | | |
| Straw Directed behaviour | | | | | |
| Pig Directed behaviour | | | | | |
| Pen Directed behaviour | -0,18 | 0,18 | 0,19 | 0,16 | |



Lesion development

Time consumption

Farm differences

***Who needs to
detect what?***

Implications



Detection of tail biting at early stages is possible, but needs more adaption to practical circumstances.

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It is possible to rear pigs with intact tails