

The impact of enrichment material and
space allowance on damaging
behaviour in pigs

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A N I M A L W E L F A R E

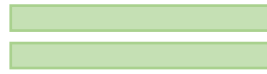
“An animal experiences good welfare if the animal is healthy, comfortable, well nourished, safe, is not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviours that are important for its physical and mental state.”

World Organization for Animal Health

B A C K G R O U N D

LITTLE SPACE

INSUFFICIENT
ENRICHMENT



INABILITY TO EXPRESS NATURAL
EXPLORATORY BEHAVIOUR

NEGATIVE SOCIAL
BEHAVIOUR

ABNORMAL
BEHAVIOUR





AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

NEED FOR APPROPRIATE SPACE ALLOWANCE AND LACK OF PROPER ENRICHMENT MATERIAL

= TWO OF THE MAIN RISK FACTORS FOR TAIL BITING
(EFSA, 2007)

CURRENT MINIMUM **SPACE**
REQUIREMENTS:

0.40m² – between 30 – 50 kg pig
(weaner)

0.65m² – between 85 – 110kg pig
(finisher weight)

The minimum **space allowance** should be increased relative to the current legal requirement to reduce many welfare consequences thus reducing tail biting behaviour and increasing growth rate.
(EFSA, 2022)



COUNCIL DIRECTIVE 2008/120/EC MANDATES THAT
'PIGS MUST HAVE PERMANENT ACCESS TO A SUFFICIENT QUANTITY OF
MATERIAL TO ENABLE PROPER INVESTIGATION AND MANIPULATION
ACTIVITIES'

THIS **MATERIAL** SHOULD BE EDIBLE OR FEED LIKE, CHEWABLE,
INVESTIGATABLE AND/OR MANIPULABLE
(Commission Recommendation (EU) 2016/336).

FINLAND, NORWAY, SWEDEN AND SWITZERLAND HAVE STOPPED TAIL DOCKING ALMOST COMPLETELY, WITHOUT LARGE PROBLEMS WITH TAIL BITING

MAKE USE OF SUFFICIENT AND SUITABLE **ENRICHMENT MATERIALS** (OFTEN STRAW)

BOTH SWEDEN AND FINLAND HAVE A HIGHER LEGALLY REQUIRED **SPACE ALLOWANCE** THAN STIPULATED BY THE EU DIRECTIVE

(De Briyne et al. 2018)

Straw: The Golden Standard

- Physical and thermal comfort
- Stimulates exploratory behaviour
- Reduced tail biting

Availability in Ireland is insufficient for pig producers to provide it to all their pigs.

Not ideal for slatted systems due to blockages

AIM

1. INVESTIGATE THE IMPACT OF THREE DIFFERENT STOCKING LEVELS ON THE BEHAVIOUR OF PIGS
2. IDENTIFY A SUBSTRATE COMPARABLE TO STRAW THAT COULD BE USED IN FULLY SLATTED INTENSIVE SYSTEMS

METHODS

47 Undocked litters
(468 pigs)

Assigned to a
space allowance
group

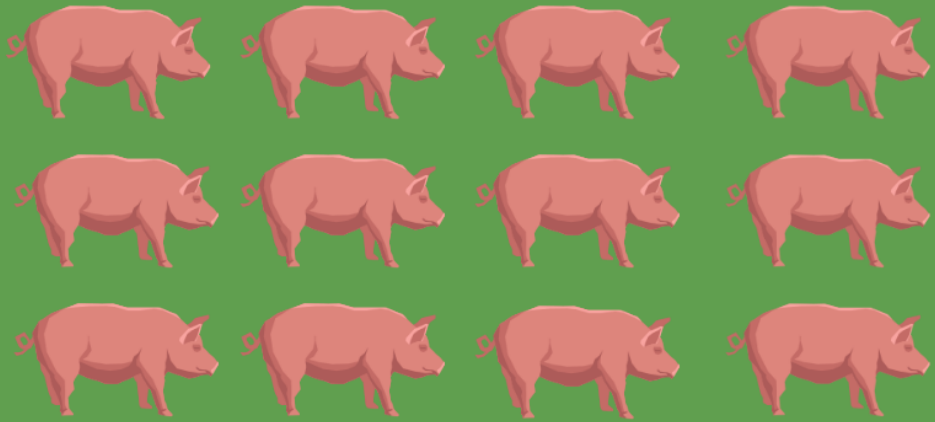
Assigned to a
material

Blocked by sex and
weight

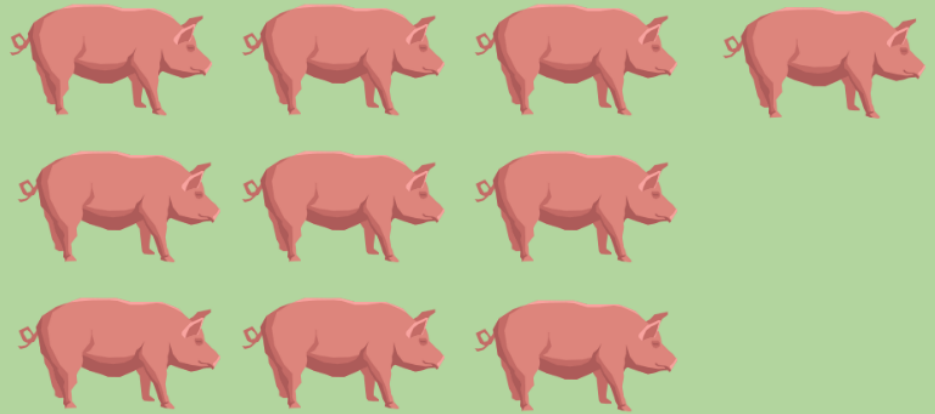
Weaned by litters



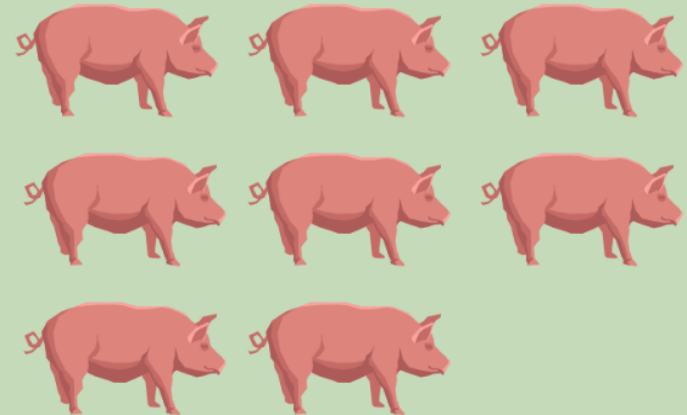
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12 pigs
(0.41m²/weaner pig and 0.83m²/finisher pig)



10 pigs
(0.49m²/weaner pig and 1.00m²/finisher pig)



8 pigs
(0.62m²/weaner pig and 1.24m²/finisher pig)

LOOSE MATERIAL

- Straw – the Golden Standard
- Grass (Chou, 2019)
- Haylage (Lahrman et al., 2018)
- Hay (Jordan et al., 2008)



BEHAVIOUR

5 min, 4x/d - Every 2nd week

10 weeks post wean

Aggressive = Fight + Head knock

Damaging = Tail bite + Ear bite + Belly nosing + Body bite

Enrichment directed = Rack + Toy/Plank + Extra (for tail biting)

Rack directed alone

Tail lesions were monitored through this study

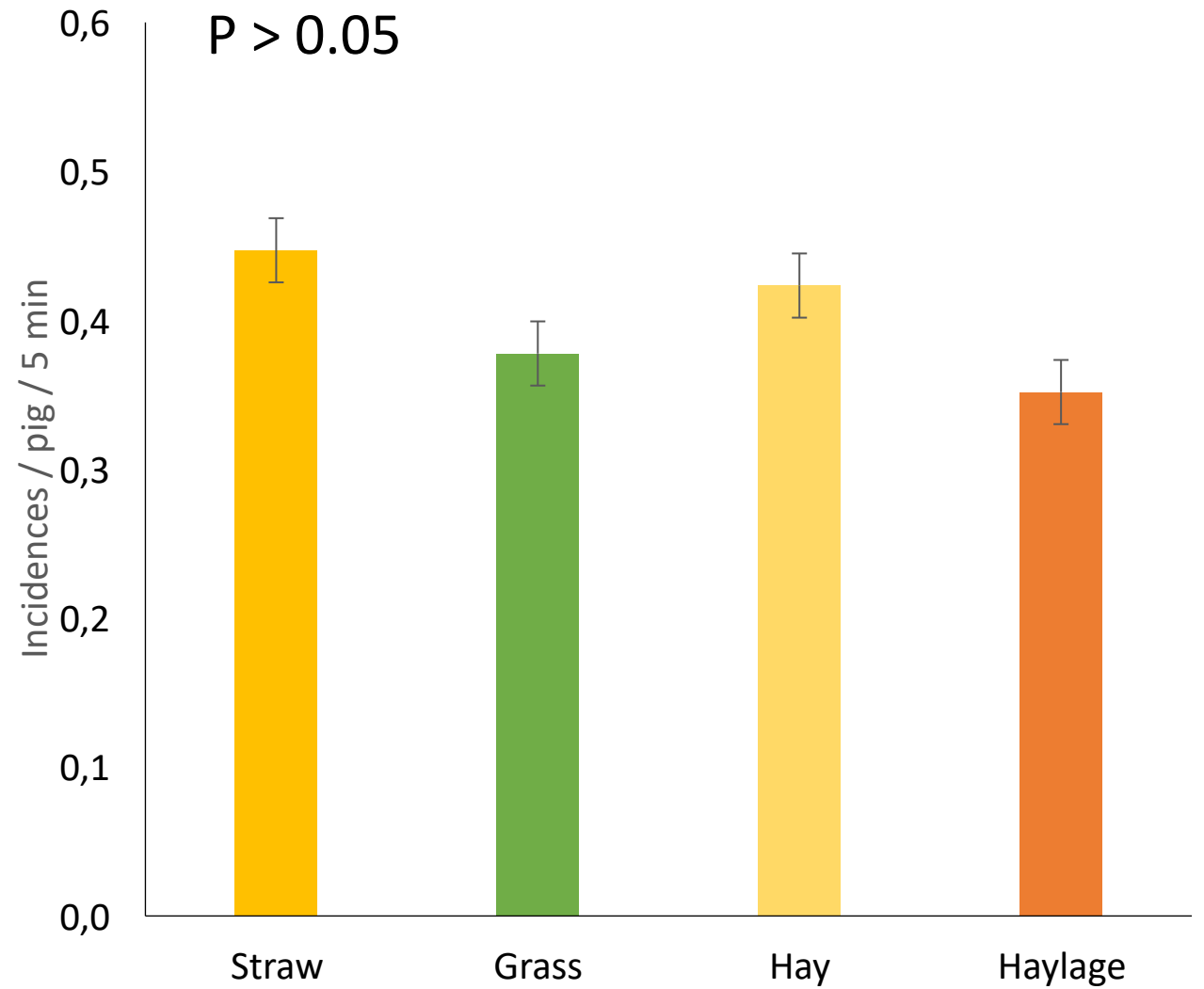
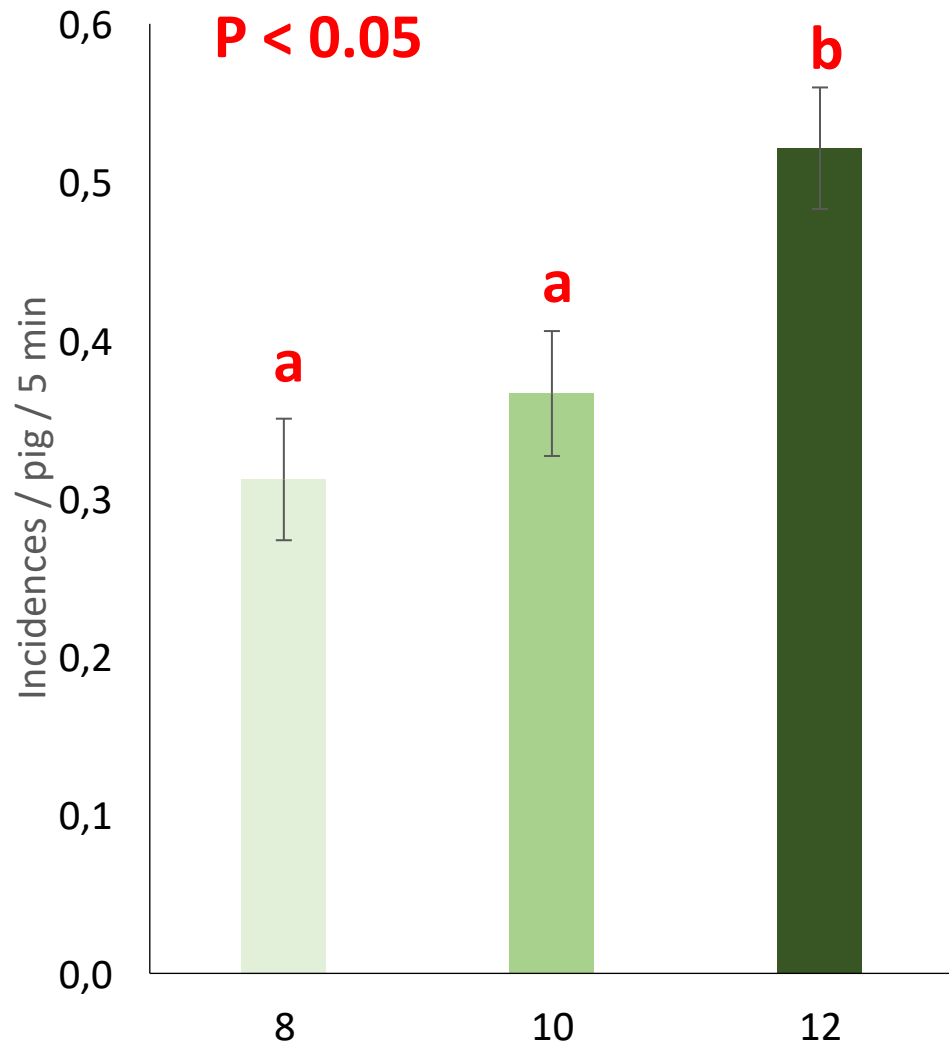
Data analysed using SAS v9.4

RESULTS

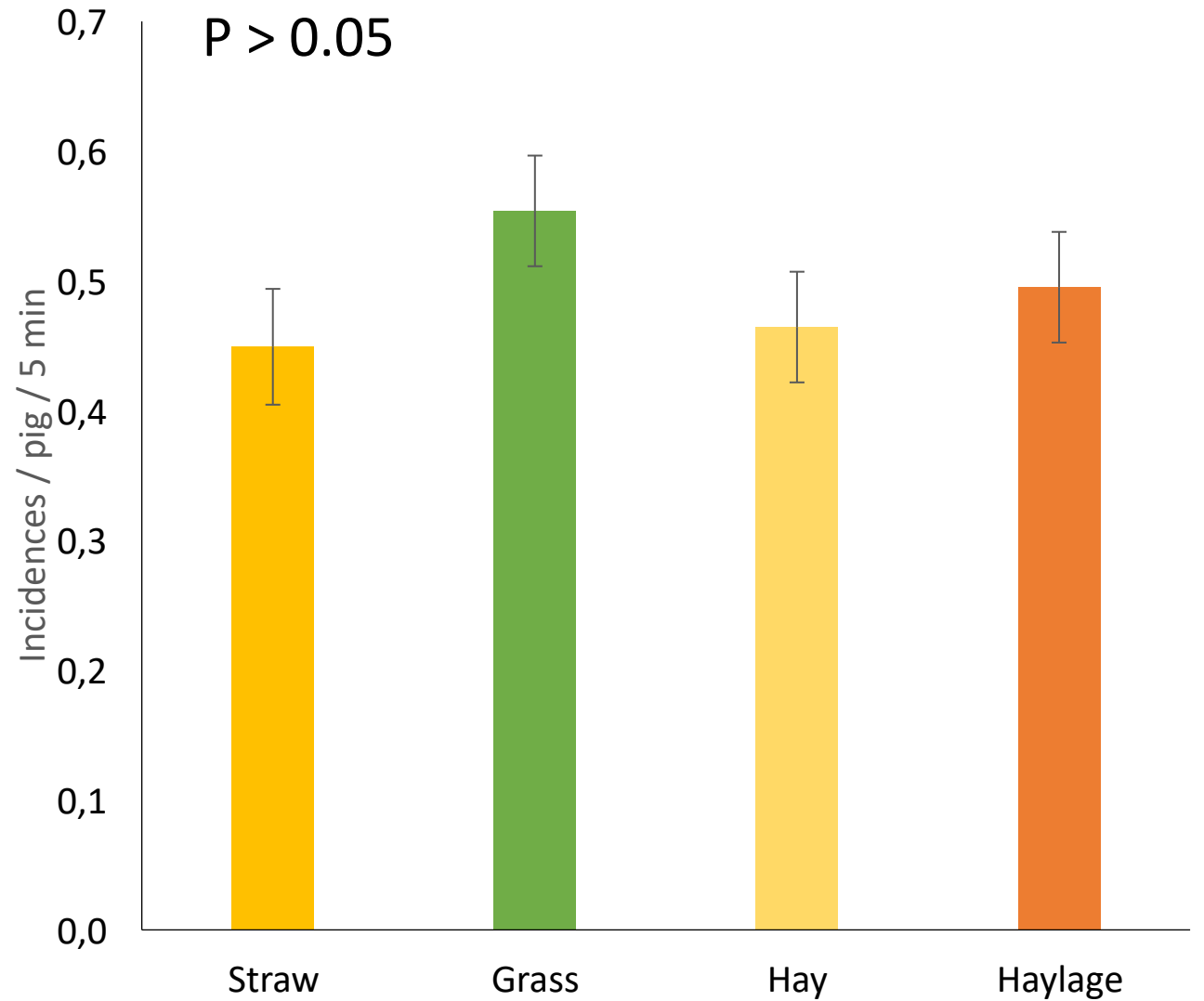
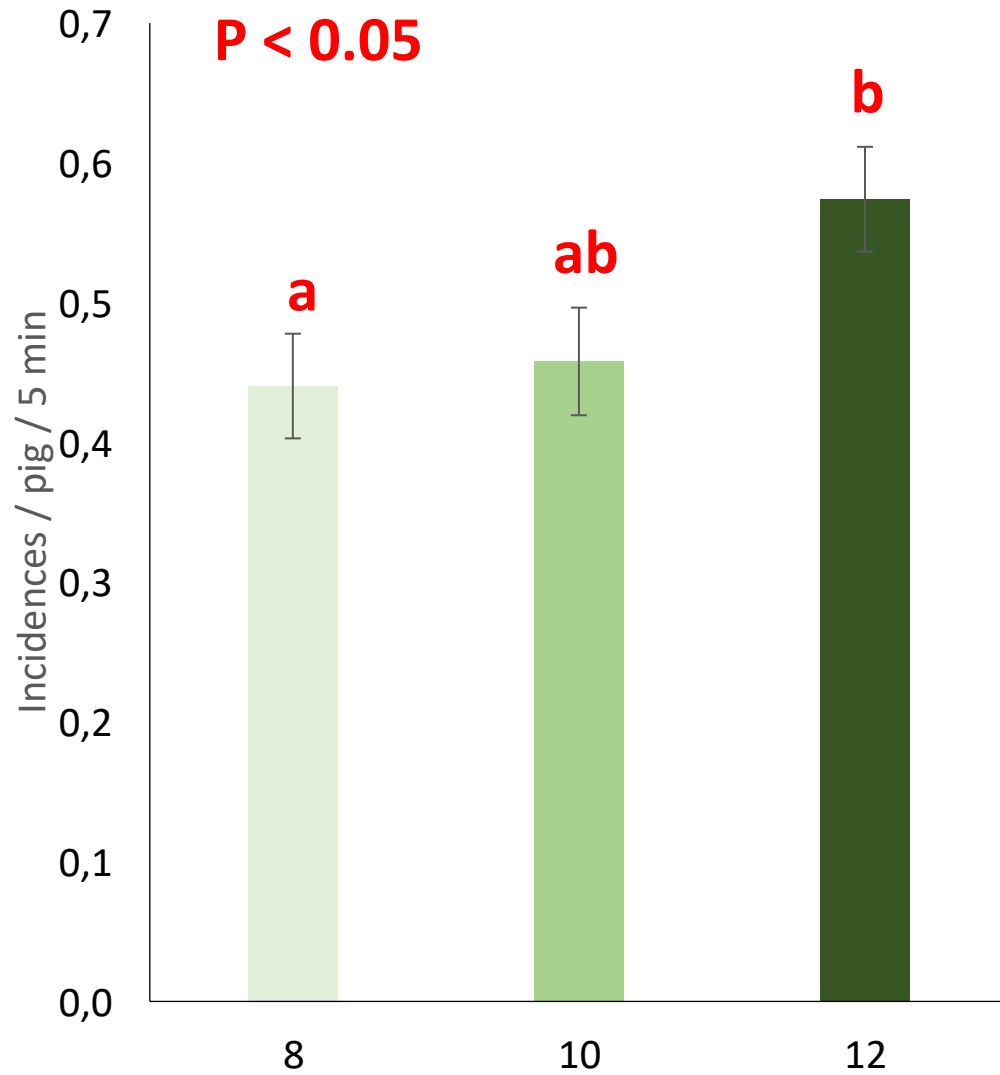


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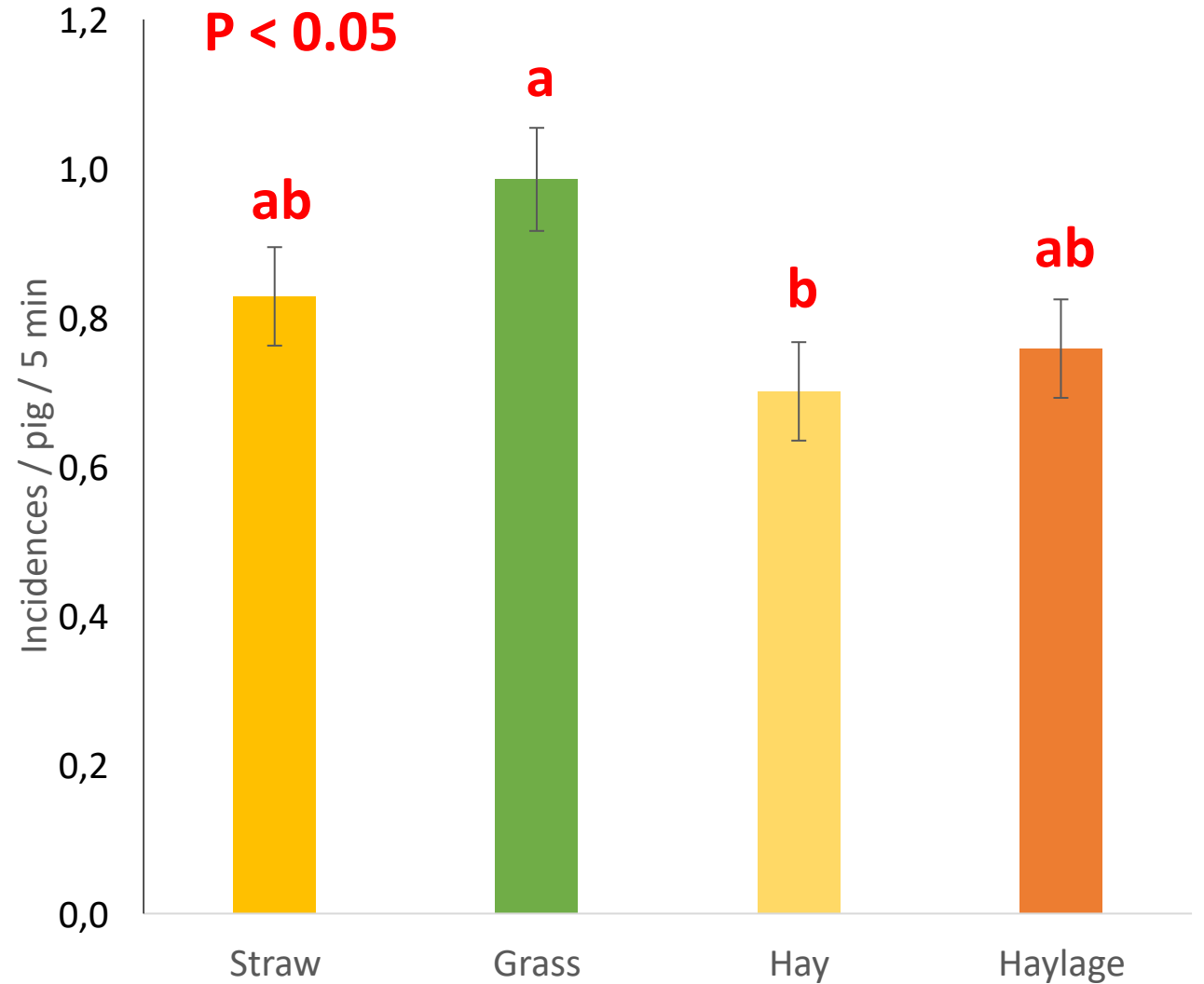
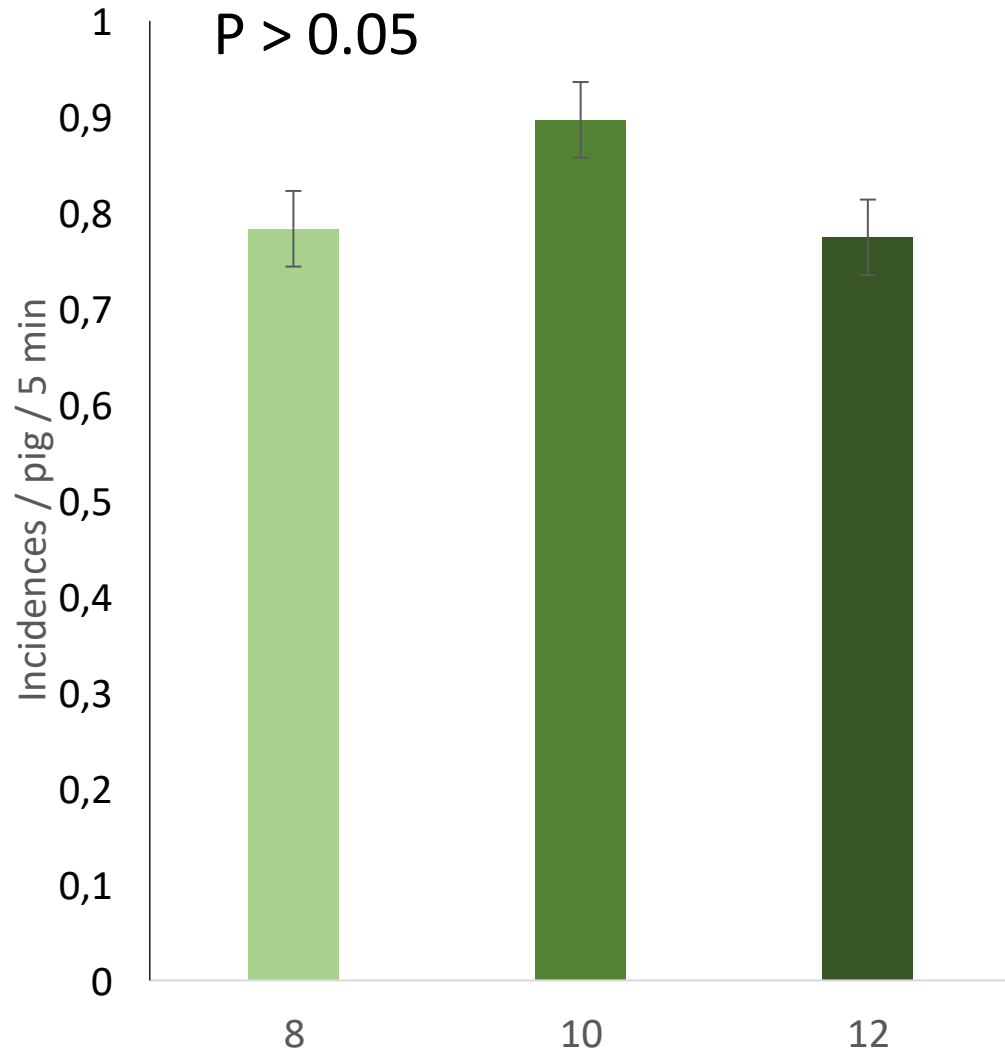
AGGRESSIVE BEHAVIOUR



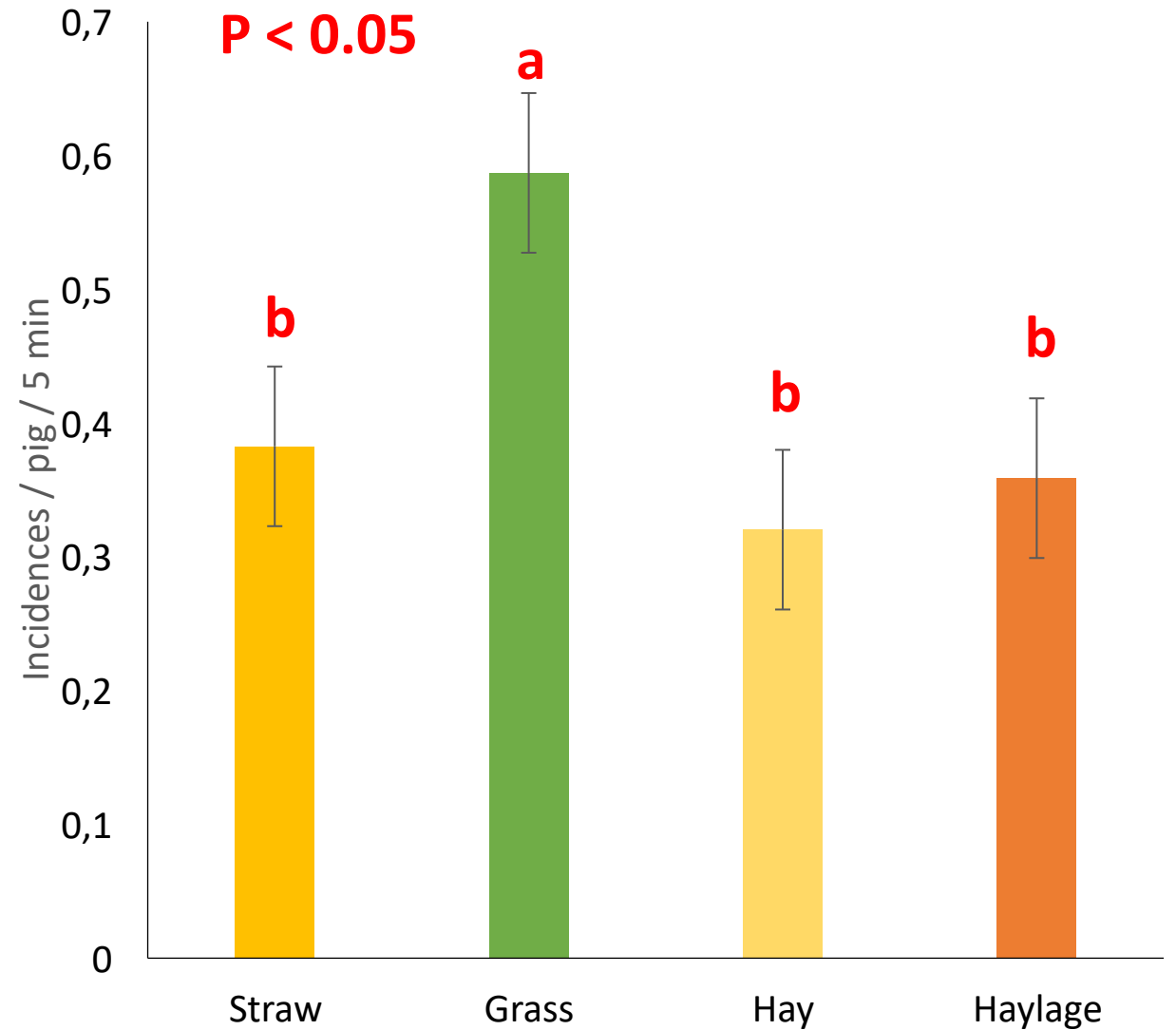
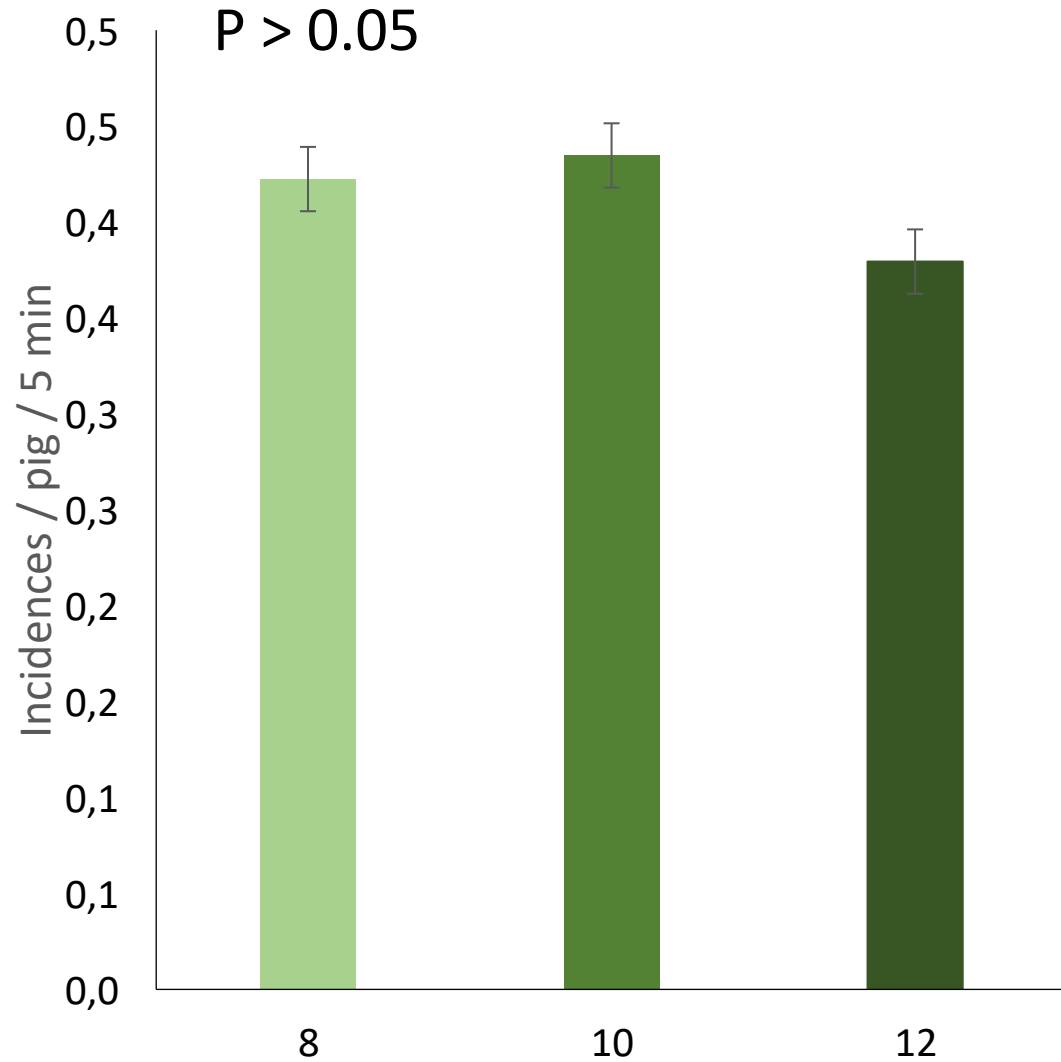
DAMAGING BEHAVIOUR



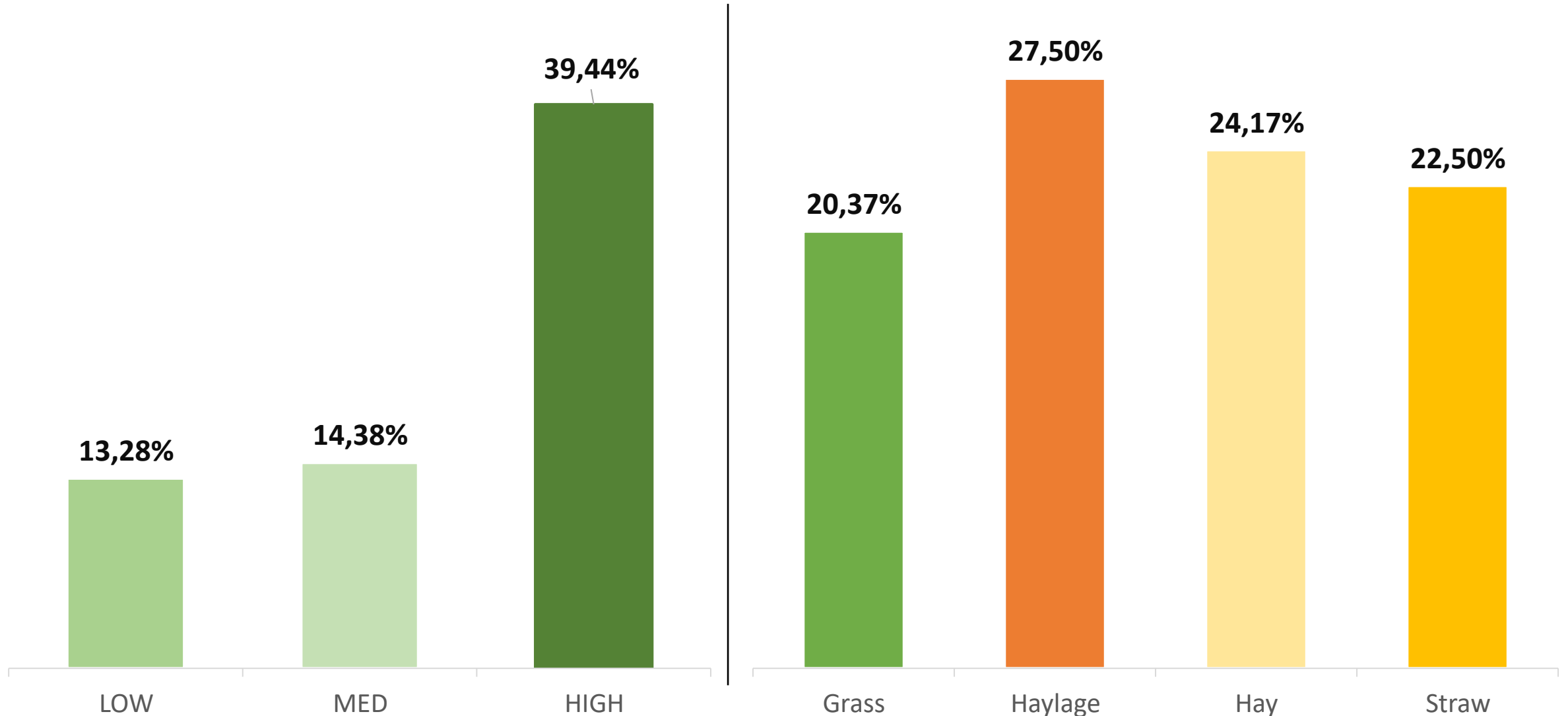
ENRICHMENT INTERACTION



RACK INTERACTION

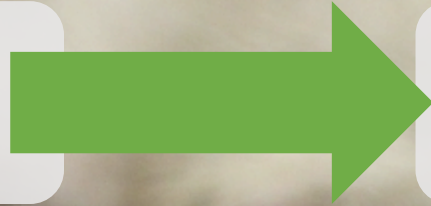


% PIGS WITH TAIL LENGTH REMOVED BY SLAUGHTER AGE



DISCUSSION

Lower stocking levels



Lower aggression and damaging behaviour

Grass, Hay and Haylage are comparable to Straw when used as an enrichment material

Grass has a slight advantage but . . .



T H A N K Y O U