Risk factors Associated with skin and vulva lesions in loose-housed gestating sows and gilts in Denmark
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Risk factors associated with skin and vulva lesions in loose-housed gestating sows and gilts in Denmark

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OBJECTIVE
To investigate risk factors associated with the pen-level prevalence of skin and vulva lesions in loose-housed gestating sows and gilts in Denmark

MATERIALS & METHODS
- 21 conventional herds (>200 sows), 121 pens, 657 animals
- Pens and animals sampled according to the Welfare Quality® (WQ) protocol
- Skin and vulva lesions were defined as present if WQ score = 1 or 2
- Correlations between pen characteristics ranged from 0.07 to 0.49 (Cramer’s V)
- Univariable generalised linear mixed models with a negative binomial response and herd and pen as random effects.

CONCLUSION
The results suggest that occurrence of skin and vulva lesions may have different aetiologies. Vulva lesions were a farm level problem, whereas skin lesions were a pen level problem. Further research is needed to uncover the effects of pen design, feeding system, amount of straw as rooting material and its application, group dynamics and group size on vulva and skin lesions.

RESULTS
Number of animals, n=657

<table>
<thead>
<tr>
<th>Lesion Type</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulva lesions</td>
<td>7%</td>
</tr>
<tr>
<td>Vulva and skin lesions</td>
<td>3%</td>
</tr>
<tr>
<td>Skin lesions</td>
<td>29%</td>
</tr>
<tr>
<td>No lesions</td>
<td>61%</td>
</tr>
</tbody>
</table>

Skin lesions

Vulva lesions

Feeding system
- Closed stalls: 1.0 (Ref.)
- Open stalls: 0.9 (0.3-2.3)
- Feeding automat: 3.0 (1.5-6.2)
- Floor feeding: 1.4 (0.6-3.1)
- Trough: 0.8 (0.3-1.9)

Animal group
- Sows and gilts: 1.0 (Ref.)
- Sows: 0.8 (0.4-1.7)
- Gilts: 0.2 (0.0-0.7)

Group size
- >8 animals: 0.7 (0.2-2.1)
- 8-20 animals: 1.0 (Ref.)
- 20-40 animals: 0.8 (0.3-1.8)
- 40-60 animals: 1.6 (0.7-3.7)
- >60 animals: 2.7 (1.3-6.2)

Rooting material
- >2 L straw: 0.8 (0.3-1.7)
- Up to 2 L straw: 0.4 (0.1-1.0)
- Wood and/or metal: 0.7 (0.2-2.6)
- No rooting material: 1.0 (Ref.)

Mixing
- Stable group: 1.0 (Ref.)
- Recently mixed group: 2.2 (1.1-4.1)
- Dynamic group: 2.1 (0.9-5.3)

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