Transdisciplinary approach to improve concrete outdoor runs for organic pigs: Identification of innovations

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How to improve concrete outdoor runs?

Potential for improvement regarding

**Animal welfare**
(Leeb et al. 2019)

**Ammonia emissions**
(Olsson et al. 2014)

**Practical solutions?**
**Ask practitioners!**

**AIM**
Identification of 2-3 innovative measures to improve animal welfare and reduce ammonia emissions → for testing in on-farm experiments

Proven Welfare and Resilience in organic pig production
Identification and selection process

**Stakeholder Input**
Workshops & interviews
Farmers & experts
8 countries
Common protocol
Best practice & new ideas
Aspects of sustainability

**Evaluation**
8 researchers from 6 countries
4 criteria
5-point-scale: 1 = 😊 to 5 = ☹️

**Selection**
Dialogue-based
Stepwise process
Considering stakeholder input
Animal welfare prioritized
Stakeholder input

- 7 workshops
- 49 individual interviews
- 78 farmers
- 38 experts

- 102 individual statements on improvement measures for concrete outdoor runs
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<th>Pasture access</th>
<th>1.3 [1.0-1.7]</th>
<th>Manure</th>
<th>2.1 [1.0-3.4]</th>
<th>Pasture access</th>
<th>1.4 [1.2-1.7]</th>
<th>Enrichment</th>
<th>2.2 [1.5-2.8]</th>
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<td>Roof</td>
<td>2.4 [1.3-4.0]</td>
<td>Other*</td>
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* E.g. brushes, light, track grids for handling pigs, weight-sorting system.
1) Optimisation of **rooting areas**

2) Improved location and frequency of provision of **roughage**

3) Strategies for the use of **showers** to mitigate heat stress
Involving farmers in problem framing...
...reveals relevant research topics for practical farming
...creates commitment and motivation for on-farm studies

However, ...
...demands additional time and effort
...may lead to trade-offs when resources are limited
...requires thoughtful project planning
...We won’t stop learning!