Effect of a rubber-topped floor on gait score in group housed sows

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Introduction
Lameness in sows is a major welfare and production problem. Social interactions and increased activity appear to elevate the risk for lameness when gestating sows are group-housed on inadequate floorings.

Question
What is the effect of a rubber-topped floor compared to conventional concrete floors on sows’ gait?

Material and methods
- 6 groups of 20 hybrid sows
- 3 consecutive reproductive cycles
- Identical housing during lactation and insemination
  - Individual crates
- Group housing 4 weeks after insemination until 1 week before parturition (Fig. 3):
  - 3 groups: pens with concrete floors (Fig. 1, 1)
  - 3 groups: identical pens with rubber top layers (Fig. 1, 2)
- Gait score: tagged visual analogue scale (tVAS) (Fig. 2):
  - Score ≥60mm is considered lame
  - 4 times per cycle: moving to group, mid group, end group, and end lactation
  - Linear mixed model:
    - Fixed effects: floor treatment and reproductive phase
    - Random effects: cycle, group and sow

A rubber layer reduces (but does not eliminate) the risk of developing lameness from 4 weeks after insemination until 1 week before farrowing.

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