Incidence of lameness in sows housed in dynamic or static groups at commercial farms

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Introduction

Increasing consumer demands: improve sow welfare

Group housing of gestating sows compulsory by EU law (1-01-2013)

Goal: improve natural behaviour, activity and social interactions.

Introduction

Dynamic versus static groups

- Dynamic:

Flexible groups, regularly introduction of new sows, >1 breeding group per pen, more aggression

- Static:

Stable groups, one bout of mixing, 1 breeding group per pen, no replacement sows

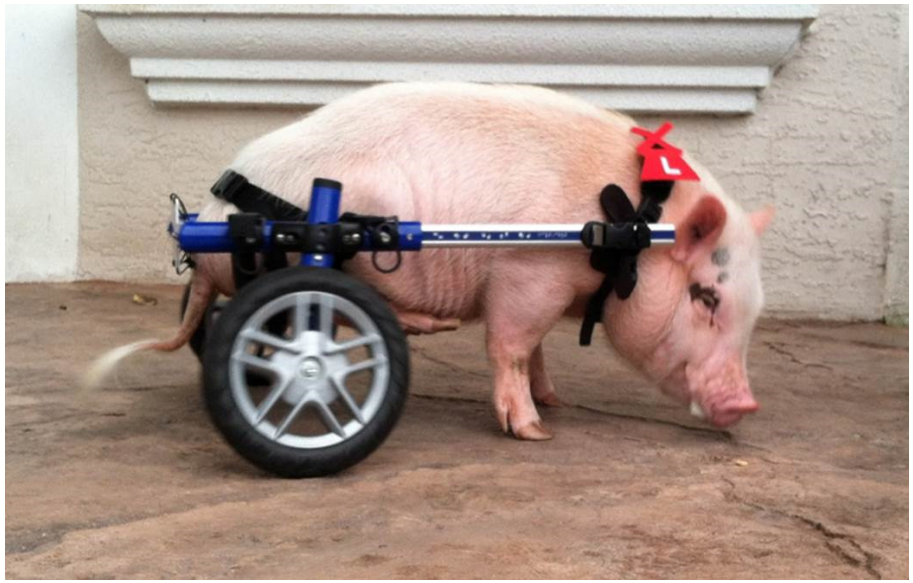
Introduction

Lameness: second most cause of early culling

Lameness has impact on economics, management and animal welfare

Contributing factors:

- Housing design
- Management practices
- Feed
- Genetic selection



Aim

Gain insight in the development and evolution of lameness throughout 3 reproductive cycles of commercially kept sows

→ Compare the incidence of lameness in static and dynamic groups in different stages of the reproductive cycle

Hypotheses

1. Incidence of lameness peaks after moving to group housing

2. Incidence of lameness is higher in dynamic groups compared to static groups

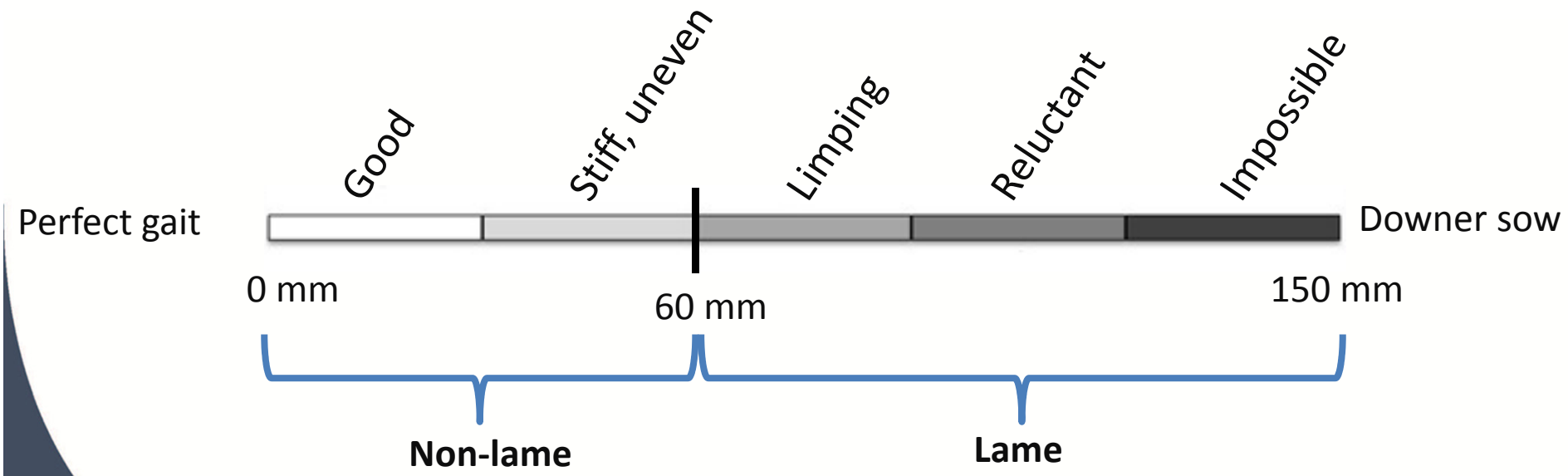
Materials & Methods

- 10 commercial farms in Flanders, Belgium
- 5 static & 5 dynamic
- Start: 250 gilts and sows
  - No replacement sows will be monitored
- 3 cycles (February 2013 - June 2014)
- Visual assessment of the gait

Materials & Methods

Locomotion was scored with a t-VAS.

Sows were considered lame if locomotion score ≥ 60mm.



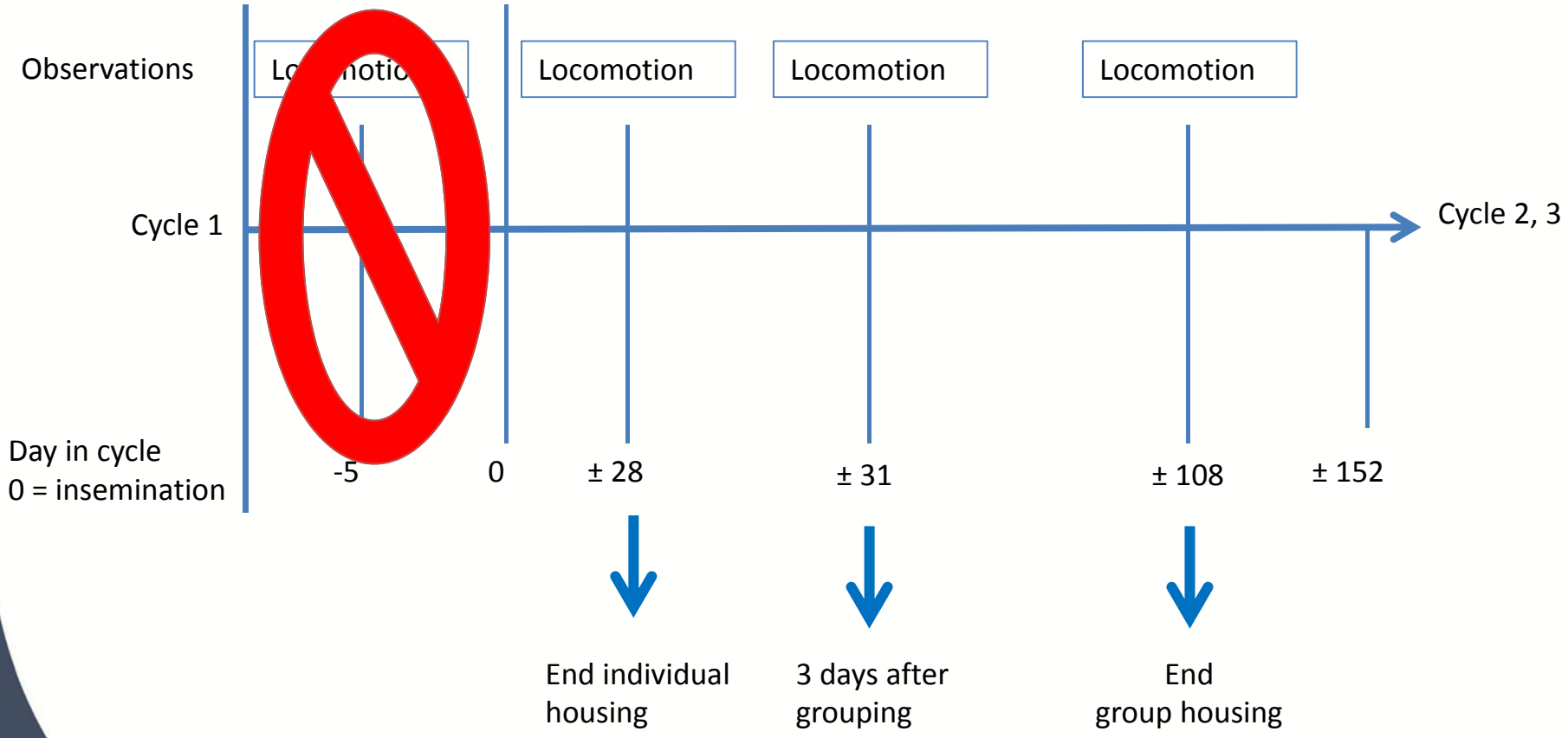
Materials & Methods

Reproduction cycle of sows and corresponding housing

Day in cycle	What?	Housing
0	Insemination	Individual gestation crates
± 28	End gestation stall period	Move to group housing
± 108	End group housing period	Move to individual farrowing crates
± 152	End of reproductive cycle	Move to gestation crates

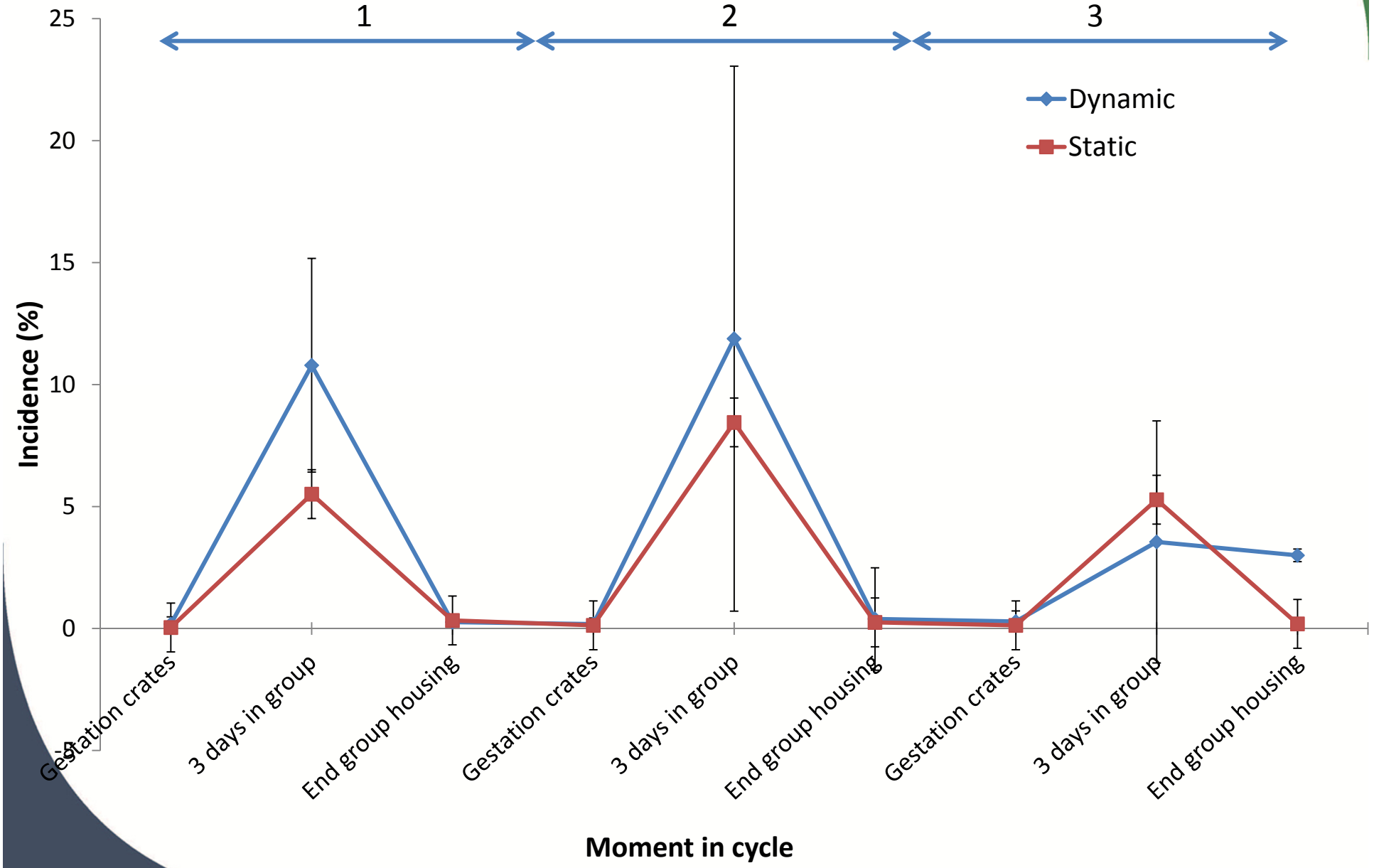
Materials & Methods

Timeline of observations



Results

Mean incidence of lameness throughout 3 reproductive cycles



Results

- Peaks in incidence of lameness at grouping
- No differences between incidence in lameness between static and dynamic group housed sows (P=0.31)
- No differences between the 3 monitored reproductive cycles (P=0.15)

Discussion

- Variation between farms
- Sample size possibly not large enough to indicate differences
- Many sows did not complete 3 reproductive cycles (N=122)
- Find solutions to preclude peak at grouping
  - Group-farrowing housing
  - Group-insemination housing

Conclusion

Incidence of lameness peaks at grouping, however no differences are found between static and dynamic groups

Future

Within this experiment:

- Analysis of observed skin and claw lesions and blood biomarkers
- Influence of pen design and stocking density

Thank you for your attention

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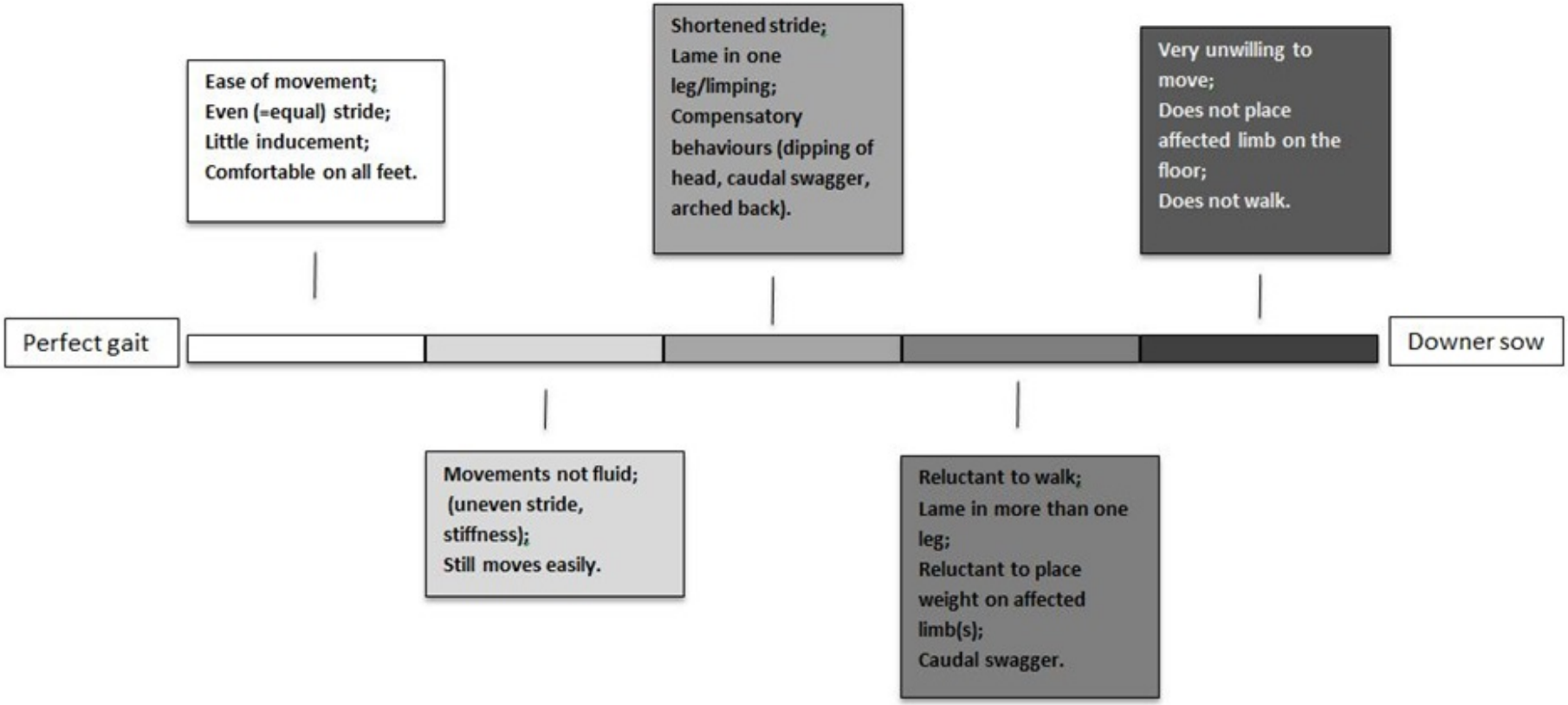
Ease of movement;
Even (=equal) stride;
Little inducement;
Comfortable on all feet.
Shortened stride;
Lame in one leg/limping;
Compensatory behaviours (dipping of head, caudal swagger, arched back).
Very unwilling to move;
Does not place affected limb on the floor;
Does not walk.
Perfect gait
Downer sow
Movements not fluid;
(uneven stride, stiffness);
Still moves easily.
Reluctant to walk;
Lame in more than one leg;
Reluctant to place weight on affected limb(s);
Caudal swagger.