Relation between (the genetic merit for) mothering ability and periparturient sow behaviour

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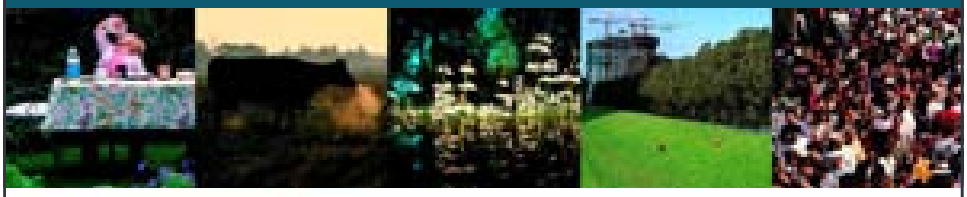


Introduction (1)

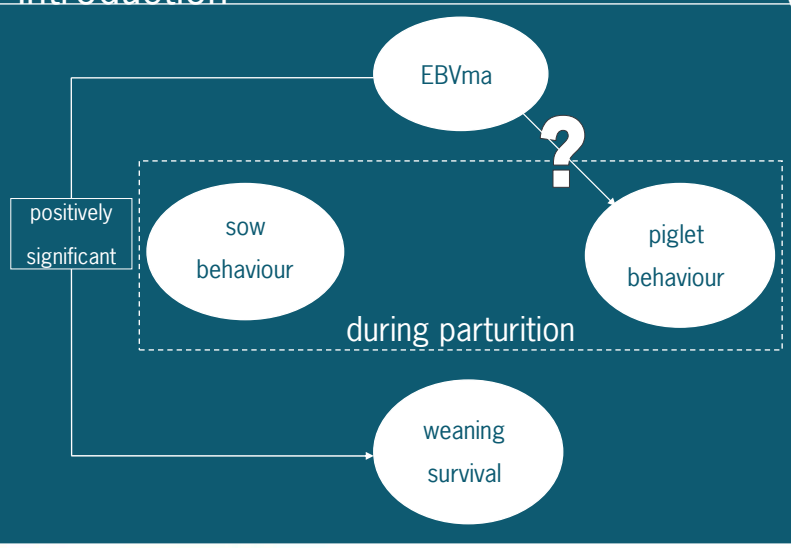
$$\text{piglet survival at weaning} = \frac{\#\text{piglets alive at weaning}}{\#\text{liveborn piglets} \pm \text{cross fostered piglets}}$$

genetic merit for mothering ability (=EBVma)

=

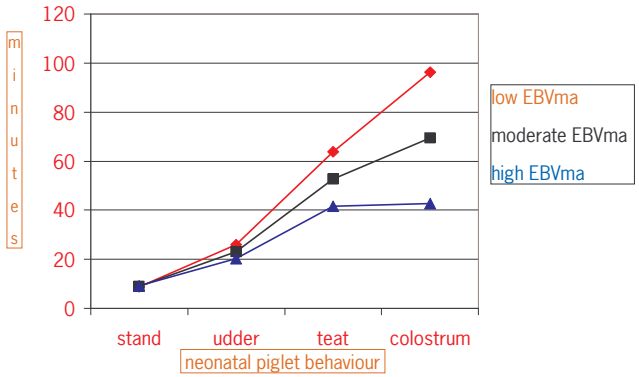
estimated as the genetic maternal effect of the foster sow on piglet survival at weaning

Introduction (2)

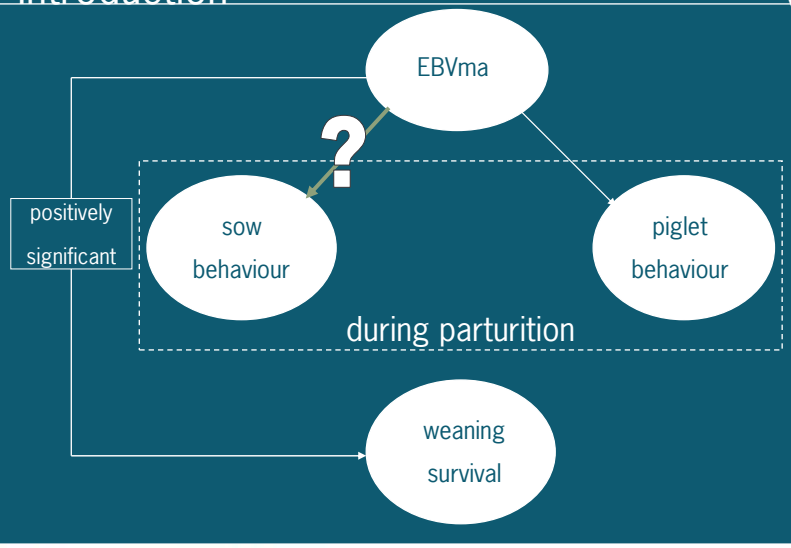


Introduction (3)

Neonatal piglet behaviour and time after which it occurs for piglets from sows with different EBVma (Knol et *al.* 2002)



Introduction (4)



Introduction (5)

- objective:
  to relate maternal behaviour during parturition to the genetic merit for mothering ability

- hypothesis:
  sows with high EBVma show increased duration of lying laterally and decreased duration of standing

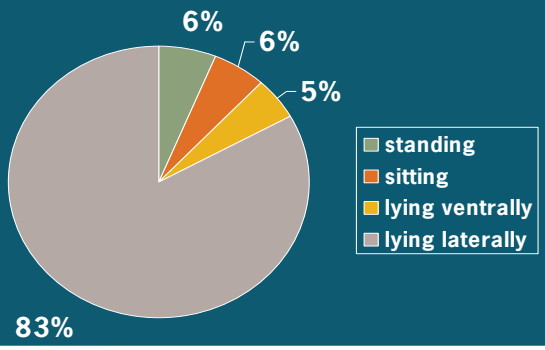
Material & Methods

- 25 sows with known breeding values for mothering ability
- observations from birth of first piglet until birth of last piglet
- behavioural observations:
  - duration of:
    - lying laterally
    - lying ventrally
    - sitting
    - standing

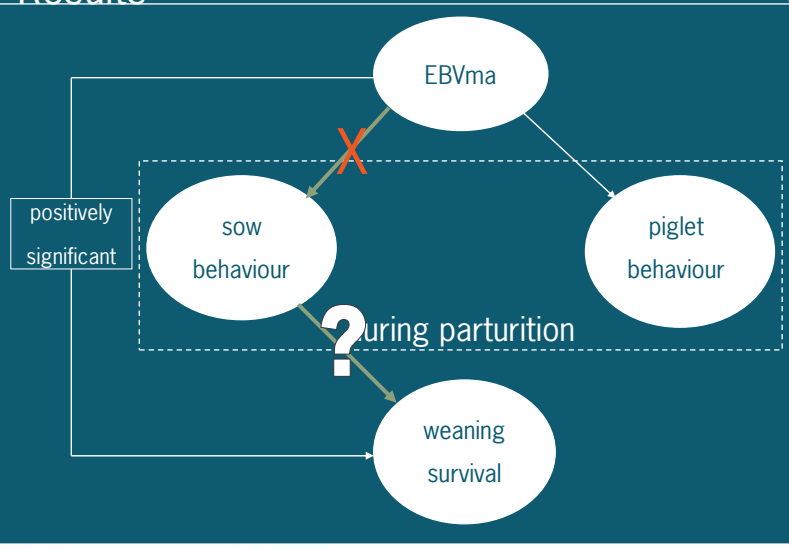
    } expressed as fractions of duration of parturition
- weaning survival of the litters

Results (1)

- no significant effect of EBVma on sow behaviour during parturition
- duration of behaviour as fraction of duration of parturition:



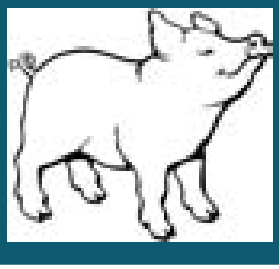
Results (2)



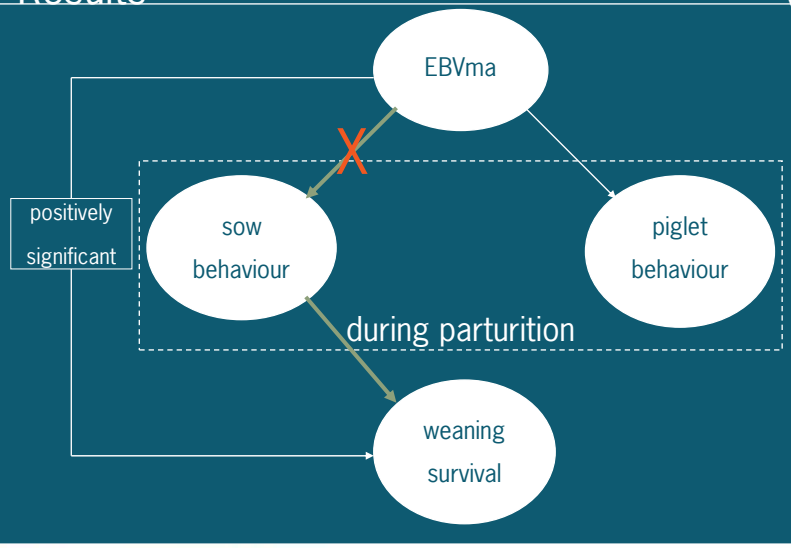
Results (3)

- effect of:
  - duration of sitting (ß= 1.23 ± 0.35; P= 0.00)
  - duration of standing (ß= -0.60 ± 0.24; P= 0.02)

  on weaning survival



Results (4)



Discussion

- EBVma and sow behaviour during parturition
  - parturitions observed in single environment
  - environment effects sow behaviour
  - EBVma estimated using information from relatives in different environments
- weaning survival and sow behaviour during parturition
  - increased sitting and decreased standing may lead to lower risk of piglet death due to overlying

Conclusion

- no effect of EBVma's on sow behaviour during parturition
  - no explanation for short interval until colostrum intake for litters of sows with high EBVma

  →interaction between sow and newborn piglets facilitated by olfactory and/or auditory cues?
- in this environment: sitting favourable over standing in terms of piglet survival at weaning

Acknowledgement

- Topigs Brasil/The Netherlands
- thank you for your attention!
- questions?