



Risk factors for sow mortality: Insights from 1.5 million production cycles

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Background & Objectives

SEGES InSight is a database retrieving information from the management software (AgroVision, Cloudfarms and SKIOLD) of more than 250 Danish sow herds (>280,000 sows). It contains detailed records of events for each sow, including information on mating, farrowing, weaning, and whether the sow was sent for slaughter, died suddenly or was euthanized. This study used SEGES InSight and other data sources to identify and prioritize risk factors for sow mortality, including sudden death and euthanasia.

Materials & Methods

SEGES InSight data were combined with information on herd size (retrieved from the national register), daily outdoor temperatures for each herd (Danish Meteorological Institute), and additional data on feeding types and systems. Data from the SEGES InSight dataset were analyzed, comprising 225 commercial herds and 1,452,438 production cycles. Inclusion criteria were sows born after January 1, 2021; mated at least once. Animals were followed until death or until December 31, 2024.

Results

The results showed that the fewer total piglets born, the higher the risk of both sudden deaths and euthanasia of sows (Figure 1 & 2). Age at first mating was found to influence the risk of both sudden deaths and euthanasia and the findings support the recommended mating age of 210–230 days. The risk of sudden deaths was found to increase along with outdoor temperatures (Figure 3). Feeding systems and feed types used in gestation units had varying impacts on sow mortality.

Discussion & Conclusion

A possible explanation of the association between a low number of total born piglets and an increased risk of sows dying, could be due to farrowing complications with retained fetuses resulting in fewer total born piglets. Such complications can substantially weaken the sow and increase the risk of both euthanasia and sudden death.

Outdoor temperatures below -5°C or above 15–20 °C increased the risk of sudden death, requiring preventive measures.

A mating age of 210–230 days can decrease sow mortality.

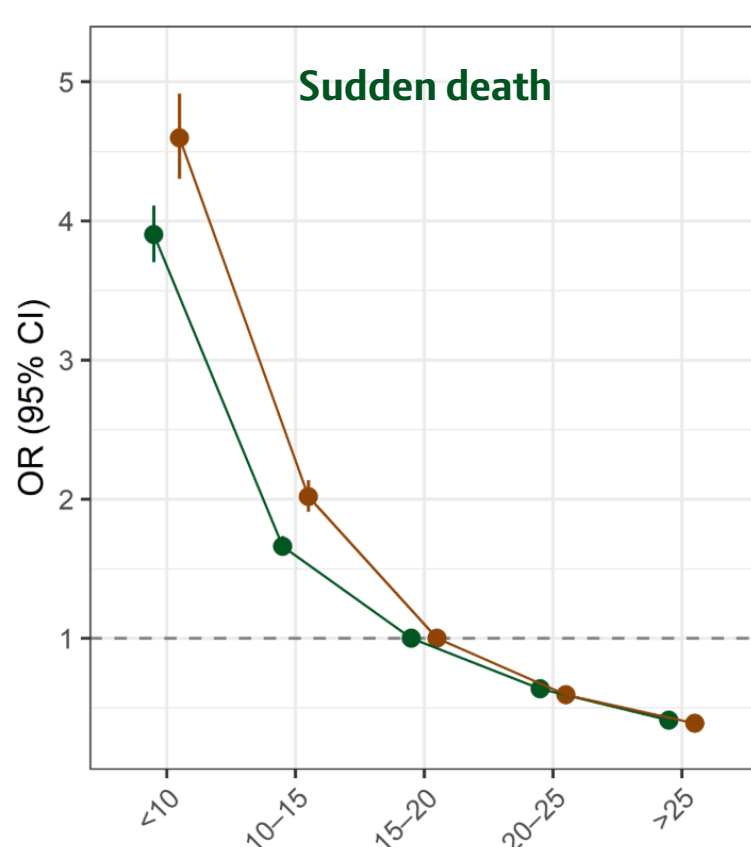
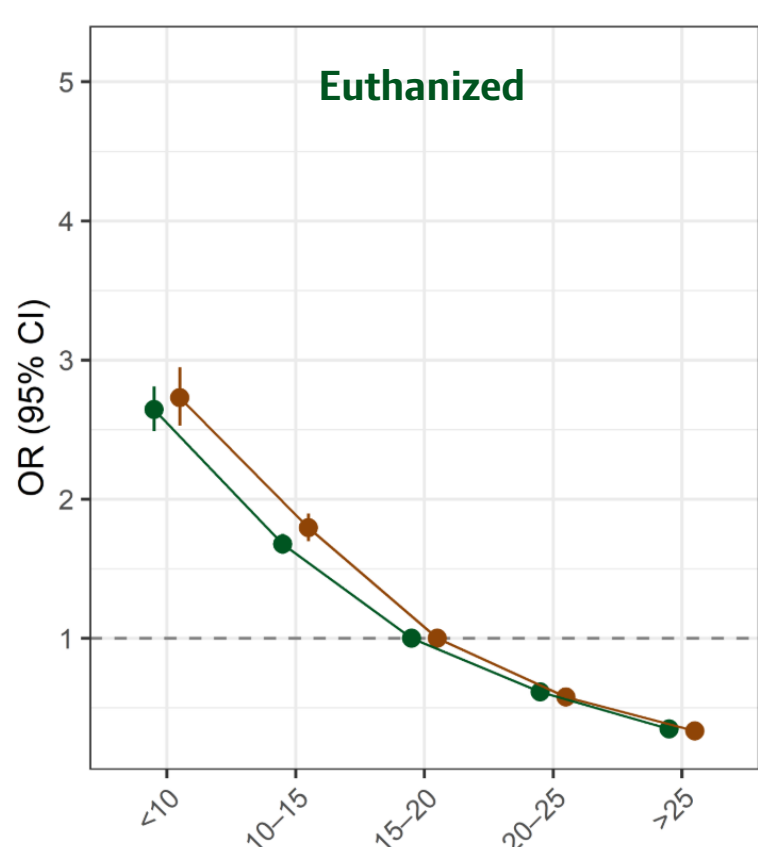


Figure 1 & 2. Association between total piglets born and the risk (OR) of euthanasia or sudden death, where deaths occurred between farrowing and weaning.

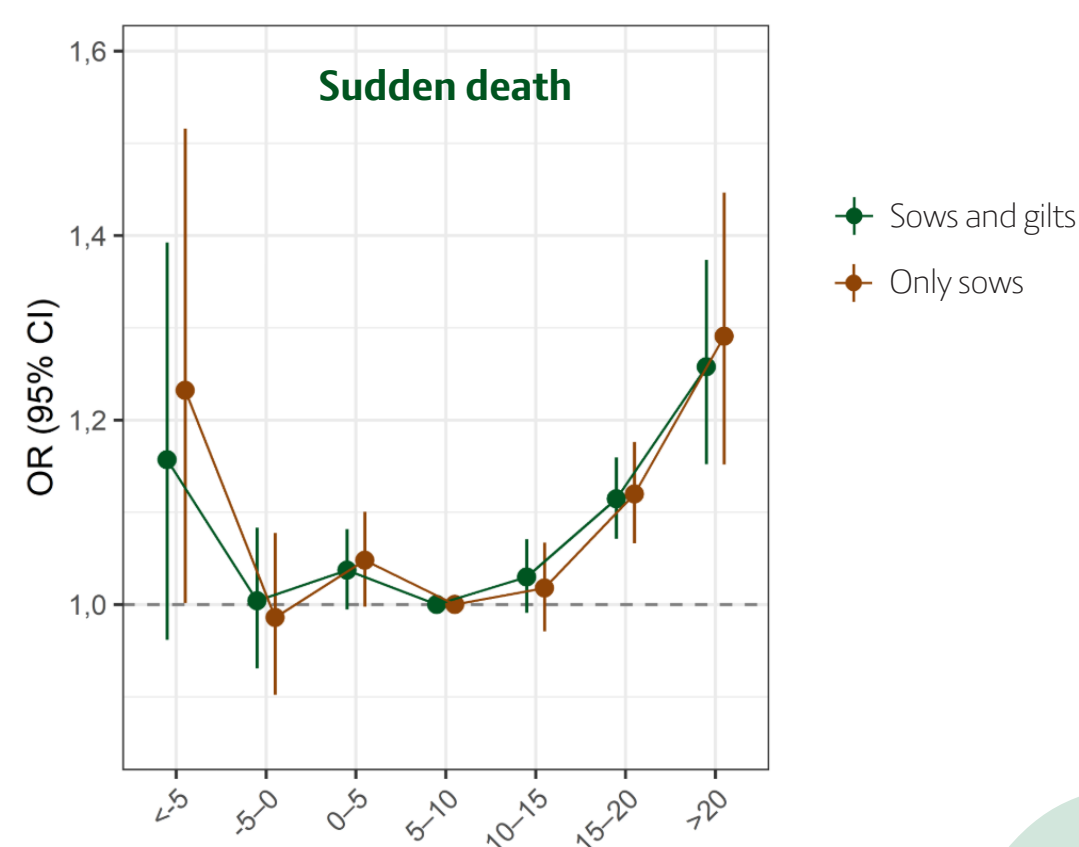


Figure 3. Association between average outdoor temperature (°C) and the risk (OR) of sudden death, where deaths occurred between farrowing and weaning.



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