

Spatiotemporal analysis of the Porcine Reproductive and Respiratory Syndrome epidemic in Denmark using laboratory submission data

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Background

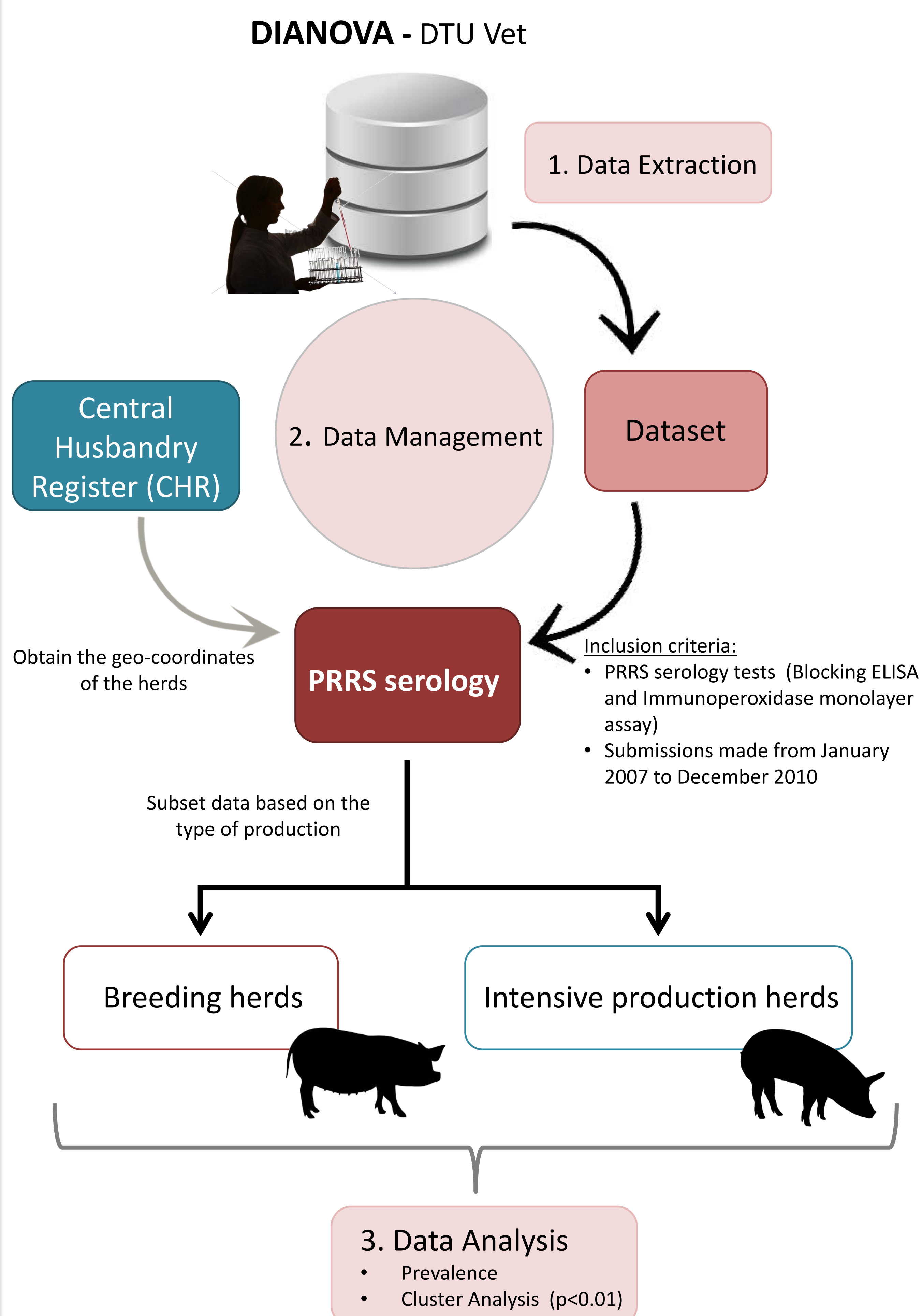
Porcine reproductive and respiratory syndrome (PRRS) virus infects domestic swine populations causing production losses. The virus has two different strains designated as European (EU) and American (US) strains. The PRRS surveillance program in Denmark is based on serology tests performed on a monthly or annual basis for the breeding and intensive production herds, respectively.

Objective

The objective of this study was to characterize the PRRS epidemic in Denmark from 2007 to 2010 using retrospective spatiotemporal analysis of serological tests.

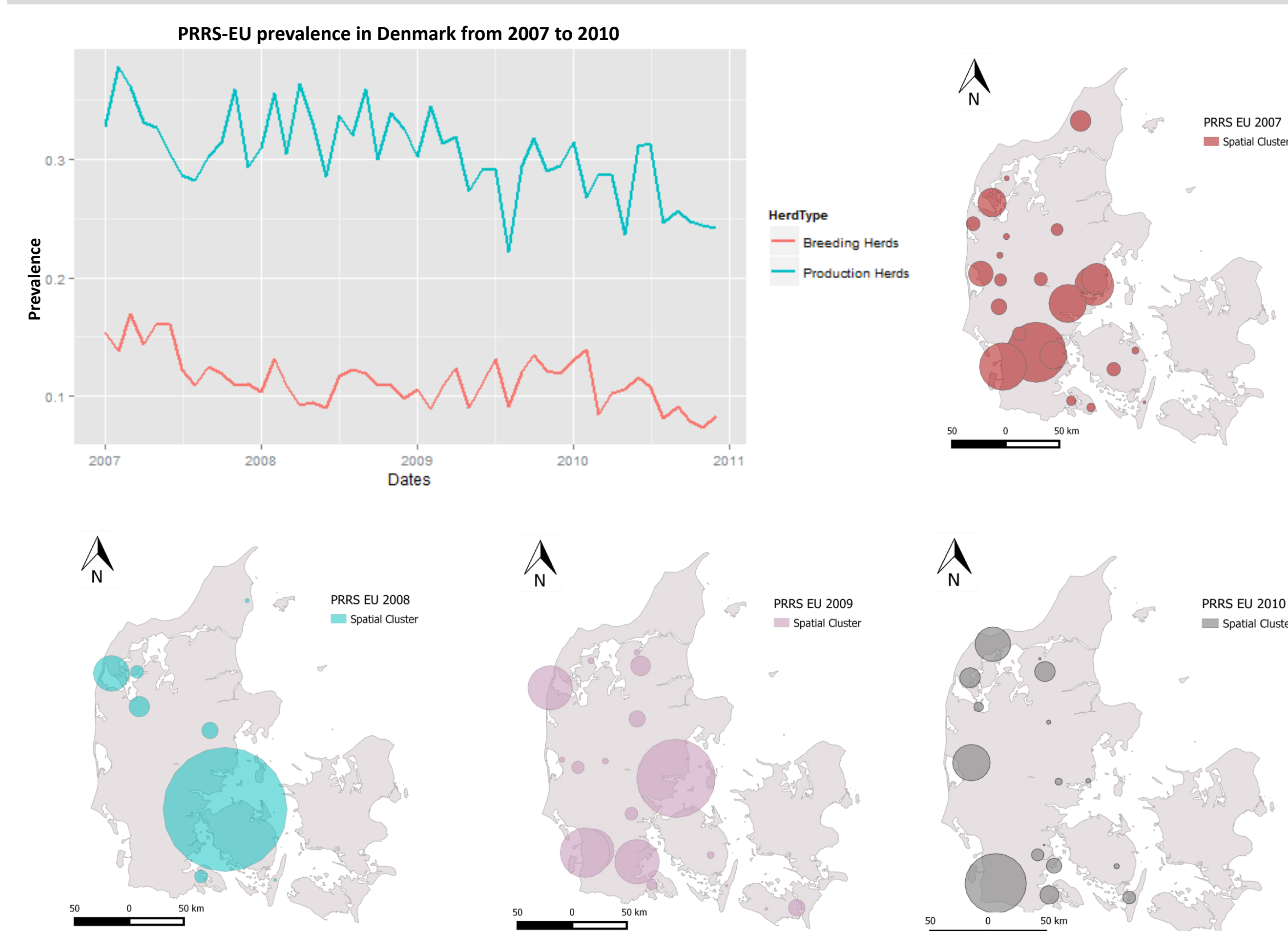


Materials and Methods

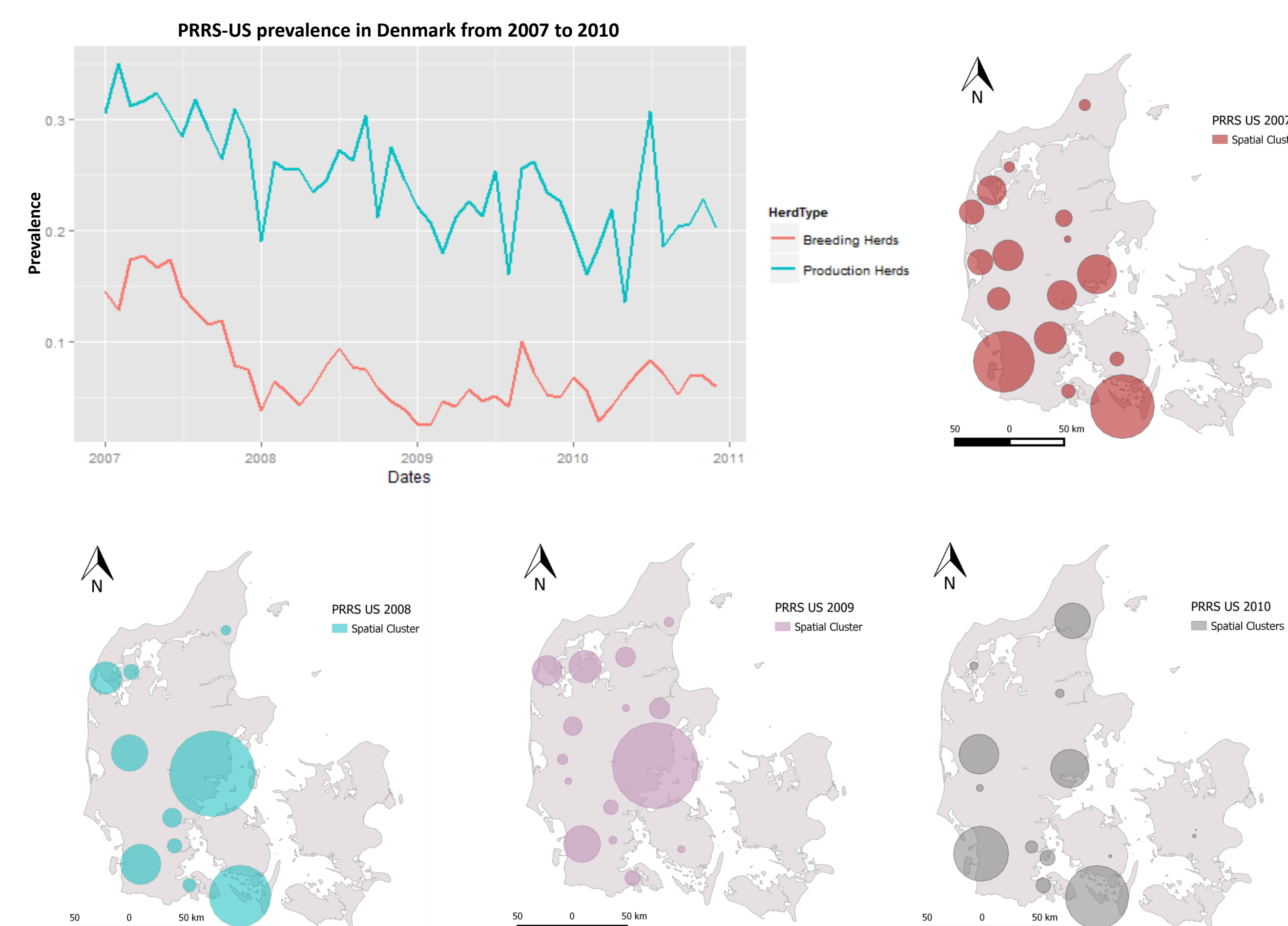


Results

PRRS-EU



PRRS-US



Relevance

- There are seasonal patterns of within-herd prevalence of PRRS-EU and PRRS-US for both herds type.
- In 2007, the majority of blood samples were just tested for one PRRS strain resulting in a high number of false positives as a result of cross reactions.
- Majority of spatial clusters are present in Jutland.
- Additional control efforts should be considered.



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