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Introduction of live animals is a risk factor for *Mycoplasma bovis* infection

BACKGROUND & AIM

Mycoplasma bovis is an important bovine pathogen causing pneumonia, mastitis and arthritis, leading to reduced animal welfare and economic losses for the farmers. There is a need to control and prevent the infection from spreading to other herds.

Aim: Analyzing patterns of antibodies over time and associated risk factors.

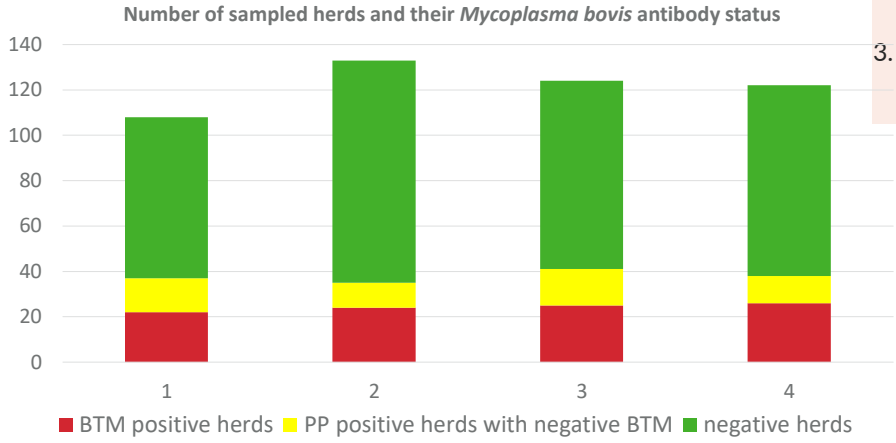

Fig. 1. Herd-level antibody status at four samplings with 6-month interval during two years.

RESULTS

- There were herds with positive primiparous cows and negative bulk tank milk. This may reflect a recent introduction or a low within-herd transmission of infection (Figure 1).
- Infected herds were dispersed in the five main regions, though in a few areas there were clusters of bulk tank milk positive herds suggesting local transmission (Figure 2).
- Higher levels of antibodies in primiparous cows were significantly correlated with herd size and introduction of live animals.

MATERIAL & METHODS

Bulk tank milk and milk from primiparous cows from 149 dairy herds in the south of Sweden were collected four times with approximately six month intervals between September 2019 to August 2021. The samples were analyzed with ID screen® indirect ELISA (IDvet, Grabels, France). For the statistical analysis we used a multilevel mixed model with herd and sample as random effects.

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CONCLUSIONS

1. Introduction of live cattle is a risk factor for transmission of *Mycoplasma bovis* between herds.
2. Analyzing antibodies in milk from primiparous cows is a useful tool to find infected herds
3. Repeated sampling increase the chance of finding newly infected herds and low level infected herds

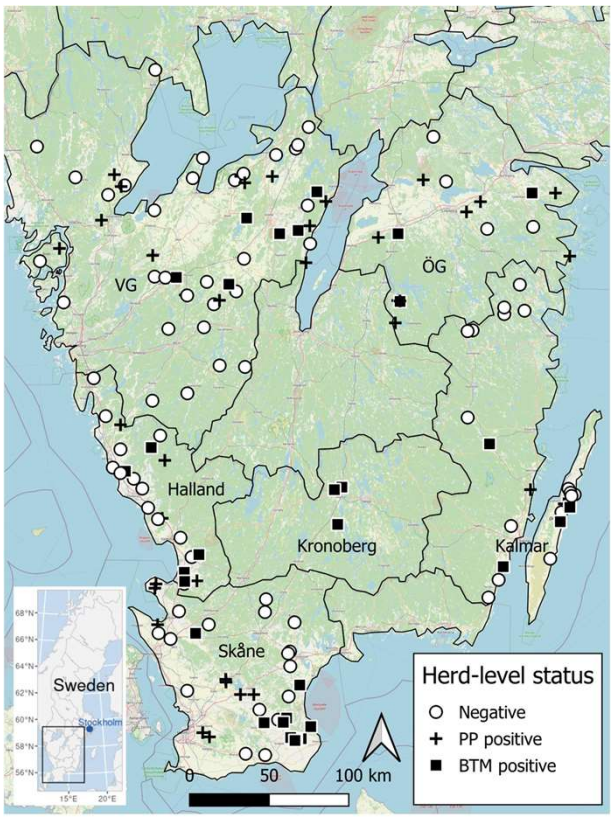

Fig. 2. Herd-level antibody status aggregated for all the samplings in the herd, the herd will be assigned a positive status if at least one sample is positive, and geographic distribution of participating herds.