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The role of cattle movement in determining the incidence risk of *Mycoplasma bovis* in Danish dairy herds between 2013-2014

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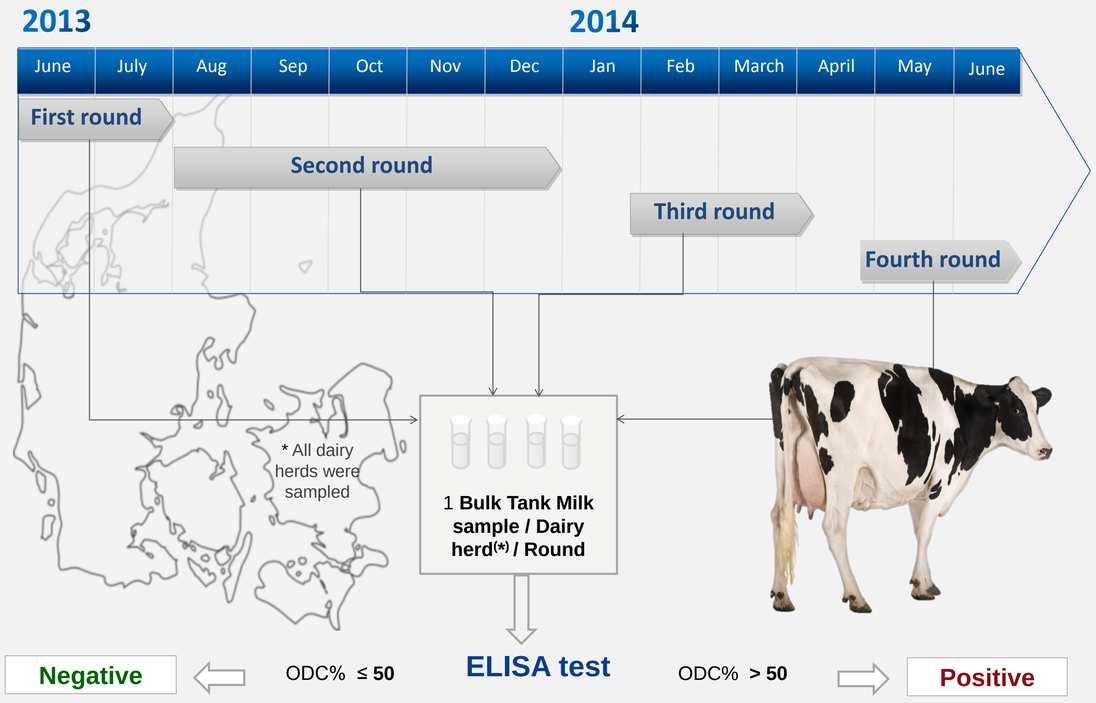
Background

- In cattle production systems direct transmission of diseases can occur through movement of infected animals between herds
- *Mycoplasma bovis* causes mastitis and systemic disease (e.g. arthritis, pneumonia, otitis media) in cattle and can be introduced to uninfected herds by purchase of infected replacement animals

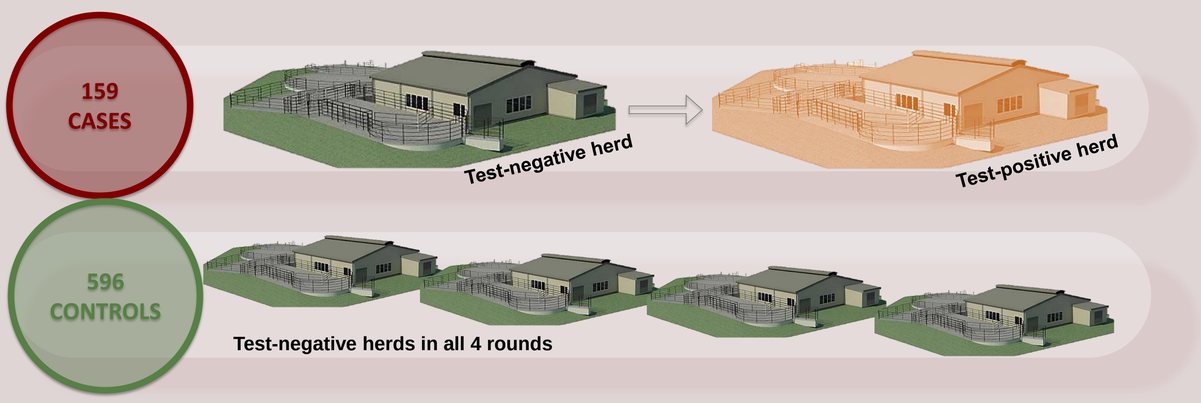
Objective

- Identify and quantify **POTENTIAL RISK FACTORS**, based on animal movements, for herd level ***Mycoplasma bovis* incidence** in Danish dairy cattle herds, by evaluation of four screening rounds of antibody ELISA (BioX-K302) measurements on bulk tank milk

Methods



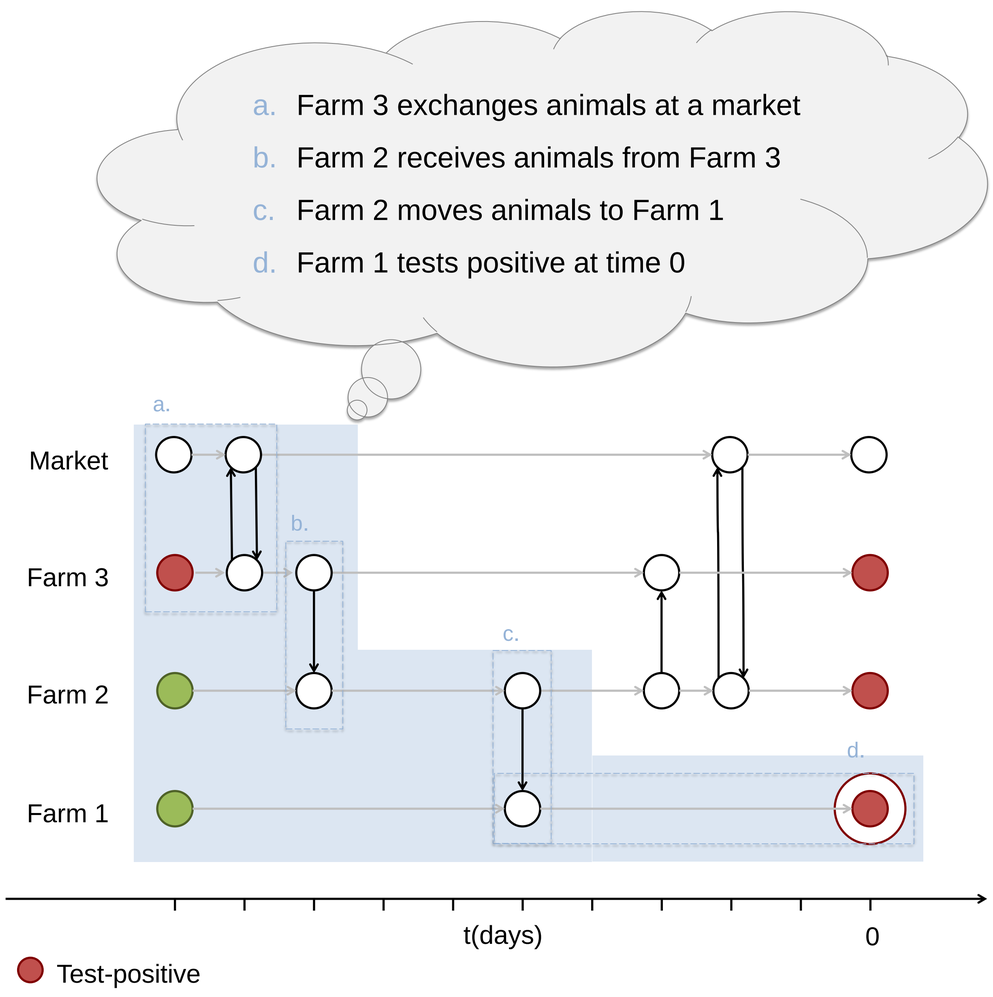
Case control Study



Control selection

1 CASE : 4 CONTROLS (Matched on herd size)

Network illustration for Farm 1



Results

Variables/Categories	OR	CI 95%	*p*
Round			
• 3	2.90	1.85 - 4.66	<<0.01
• 4	1.53	0.91 - 2.59	0.11
Farms in network			
• 1 or 2 farms	1.89	1.24 - 2.88	<<0.01
• 3 or more farms	2.39	1.47 - 3.86	<<0.01
Positive farms in network			
• 1 farm	2.23	0.59 - 7.18	0.197
• 2 or more farms	4.21	2.09 - 8.42	<<0.01
Market in network	5.02	2.33 - 10.96	<<0.01
Direct contact to market	5.83	1.83 - 19.94	<<0.01
Show in network	2.69	1.43 - 4.94	<<0.01
Direct contact to show	1.15	0.32 - 3.25	0.812

Conclusions

- More farms, test-positive farms, markets and/or shows in the network of a dairy cattle herd increase its risk of becoming test-positive for *Mycoplasma bovis*

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