

# Schmallenberg virus at latitude 64°N

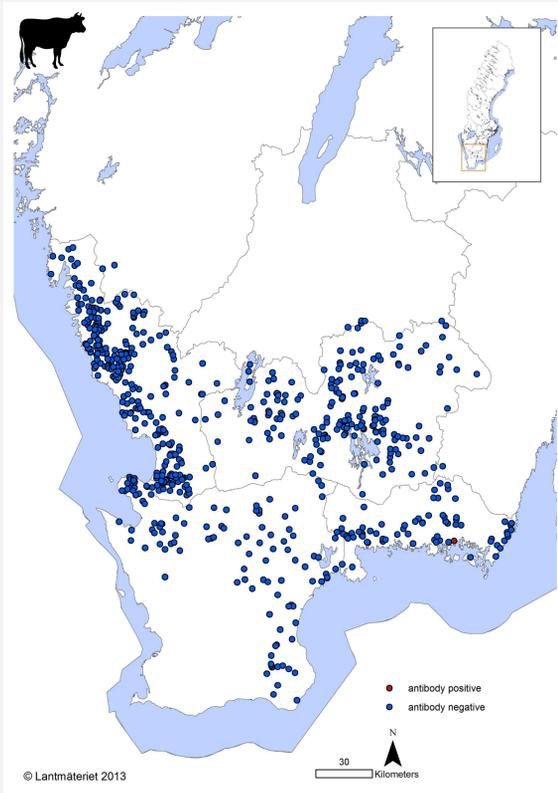
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## Conclusion

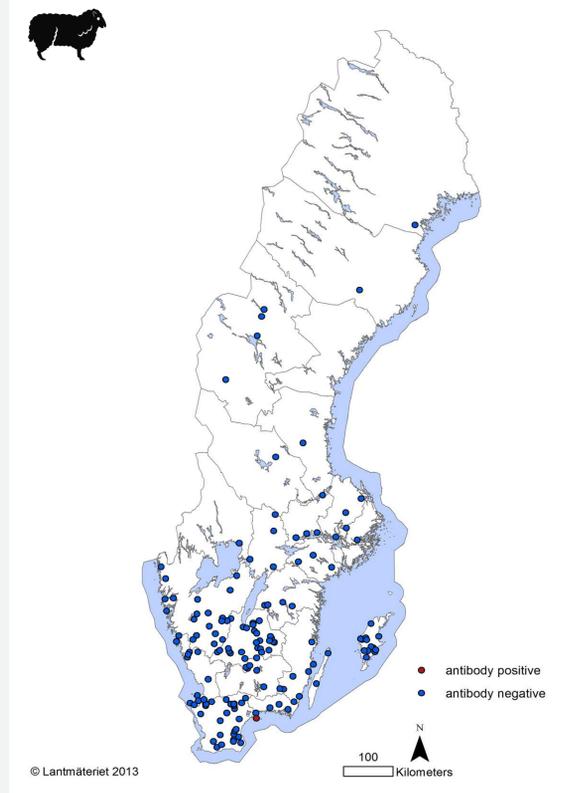
During late summer/autumn 2012 Sweden experienced an incursion of midges infected with Schmallenberg virus and a subsequent massive spread of the virus.

## Between-herd seroprevalence

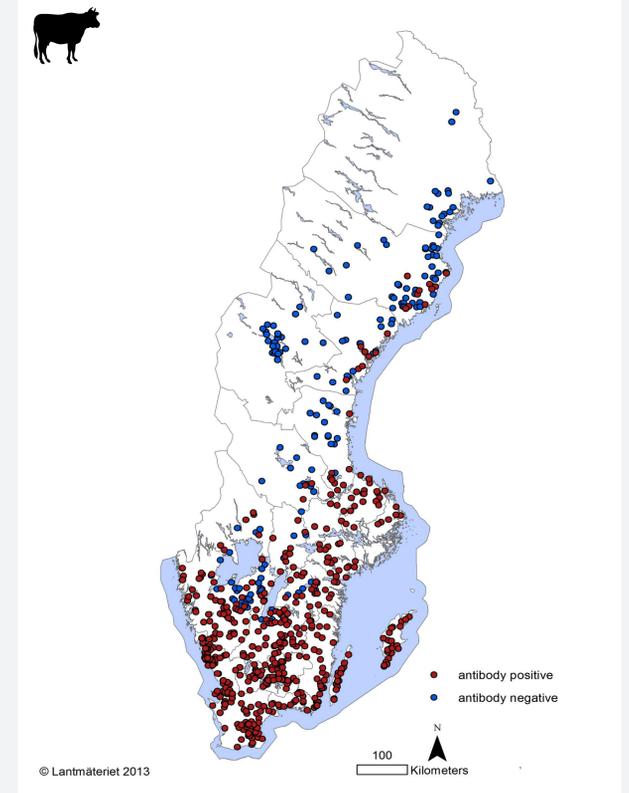
In 2012 three different serological surveys were performed. Each survey was designed to detect a prevalence of infection with Schmallenberg virus (SBV) of minimum 2% with at least 95% confidence.



*In a geographically limited bulk milk survey (based on perceived risk of introduction) conducted before the vector season 2012, only one sample was positive for antibodies against SBV.*



*In a national serological survey based on samples from sheep collected before the vector season 2012, only one sample was positive for antibodies against SBV.*



*In a national bulk milk survey conducted after the vector season of 2012, 520 samples out of 723 tested were positive for antibodies against SBV.*

## Within-herd seroprevalence

All individual cows (n=20) in the farm that tested positive in the bulk milk survey before the vector season 2012 were blood sampled and tested for presence of antibodies against SBV in June and November. In June three individuals were positive and in November all 20.

## Cases with clinical suspicion of infection

Between January 1<sup>st</sup> and November 22<sup>nd</sup> 2012, 86 ruminant fetuses and neonatal animals with clinical suspicions of infection with SBV were sampled for presence of virus genome with PCR, all with negative results.

Between November 28<sup>th</sup> 2012 and February 5<sup>th</sup> 2013, suspicions of infection with SBV were confirmed by positive findings of the viral genome with PCR in lambs from 32 out of 39 herds tested and in calves from two out of 12 herds tested. Goat kids with clinical suspicion from one herd were tested with negative result.

## Summary

Only one year after the first appearance of Schmallenberg virus in mainland Europe, 72 % of tested cow-herds in Sweden, as far north as latitude 64°N, had been in contact with the virus as shown by the presence of antibodies in bulk milk samples.

In accordance with the possible introduction time of late summer/autumn 2012, lambs and calves born from November 28<sup>th</sup> 2012 and from January 17<sup>th</sup> 2013 respectively, present malformations typical of intrauterine infection with Schmallenberg virus in early gestation.



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