BRUCELLA SEROPREVALENCE IN FINNISH WILD BOAR

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Background and Objectives

Wild boar population in Finland is about 2,100 animals. The densest populations are in Southeastern and Southern Finland (Fig 1). Wild boar may carry infectious diseases such as African swine fever, classical swine fever, Aujeszky's disease, and brucellosis. These diseases are monitored through a surveillance program involving hunted wild boar in Finland. *Brucella suis* infects primarily swines but can occassionally infect also other species such as hares, dogs, and humans.

Materials and Methods

Brucella infections in wild boar were first detected in Finland in 2015. Subsequent surveillance was conducted in 2016, 2019, 2021, and 2024. Surveillance was primarily performed using serological methods, with some organ samples cultivated for *Brucella* bacteria in 2015, 2016 and 2019. The surveillance covered the entire country, except in 2019, only samples from outside Southeastern Finland were examined. This selection was based on previous findings of seropositive animals primarily in southeastern Finland. Serosurveillance was made by Rose Bengal test in 2015, 2016, and 2019, and iELISA test (IDVet Brucellosis indirect multispecies) in 2021 and 2024. The samples positive in Rose Bengal test were further tested with iELISA.

Results

The highest number of seropositive samples was detected in Southeastern and Southern Finland, where the population is also the largest. Individual seropositive samples were also obtained from the central and western parts of the country (Fig 2). Bacterial cultivation was not performed in 2021 and 2024.

Year	Number of serum samples	Number of positive samples	Sero-prevalence	95% CI	*Brucella suis* bv 2 isolated from
2015	107	5	4,7 %	1,5-10,6 %	3 wild boars
2016	88	6	6,8 %	2,5-14,3 %	5 wild boars
2019*	146	12	8,2 %	4,3-13,9 %	1 wild boar
2021	598	16	2,7 %	1,5-4,3 %	not done
2024	503	5	1,0 %	0,0-2,3 %	not done

* Samples only from Southeastern Finland

Picture: Pixbay

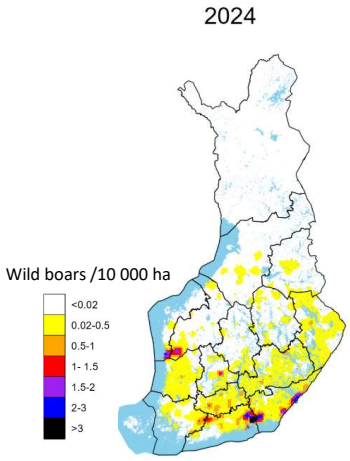

Fig 1. Wild boar population in Finland in 2024. Regionally, the largest number of wild boars is found in Southeastern Finland, but isolated concentrations also occur elsewhere in Western and Southern Finland [1].

Fig 2. Locations of seropositive wild boars in Southeastern and Southern Finland in 2015-2024. Light green: n= 1-2 samples; green: n= 6-8 samples; and dark green: n= 16 samples. * Sites of isolation of *Brucella suis* biovar 2.

Discussion and Conclusion

Brucella infections in wild boar are concerning due to the potential spread of the disease to domestic pigs. Moreover, *Brucella* bacteria have zoonotic potential and have occasionally been found in dogs consuming raw meat. Public awareness of the risk of *Brucella* infections to domestic pigs, farmers, hunters, and dogs is important.

References

[1] Natural Resources Institute Finland (Luke) [29.4.2025]. Website: https://www.luke.fi/fi/luonnonvaratieto/tiedetta-ja-tietoa/villisika/villisian-kantaarvio-2025

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