Comparison of antibody responses in serum from pigs inoculated with different doses of *Salmonella* Typhimurium and *Salmonella* Derby using three commercial ELISA test kits

Conclusion

The detection of antibodies due to infection with *Salmonella* spp. is dependent on:

1) the serotype 2) the dose of exposure 3) the immune response of the individual pig 4) the test-kit used

At individual level serology may fail to detect pigs exposed to common serotypes of *Salmonella spp.*

The aim of the study was to examine the use of serology for monitoring of salmonella infection in individual pigs.

Groups of six salmonella free pigs aged 10 weeks were orally infected with either S Typhimurium or S Derby in a low (0.65 x 103 CFU), medium (0.65 x 106 CFU) or high dose (0.65 x 109 CFU).

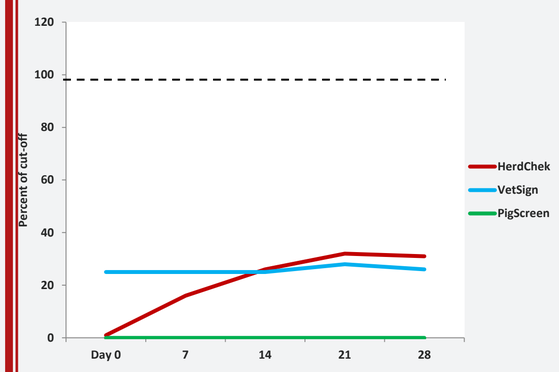
Blood samples were collected during eight weeks. The levels of antibodies in serum were analysed with different ELISA kits; **VetSign™** Salmonella, **Herdcheck®** Swine Salmonella and Salmotype®**Pig Screen** or **Svanovir®**.

Results are presented in diagrams below as percentages compared to the cut off-value of each ELISA.

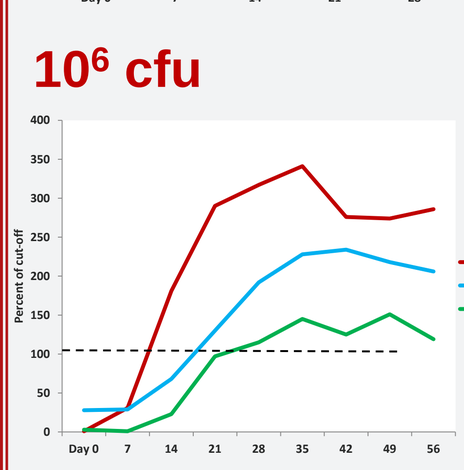
S Derby

Group of six pigs (mean values)

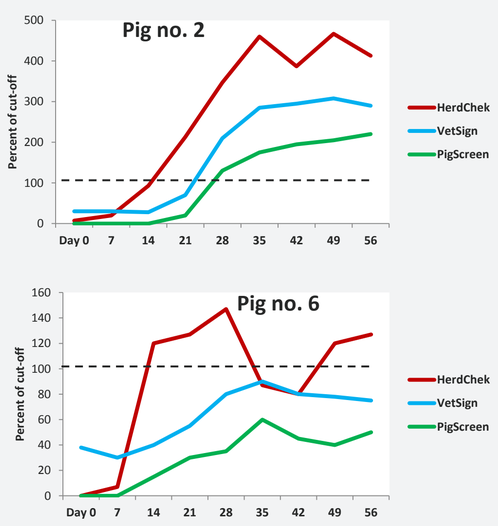
10^3 cfu

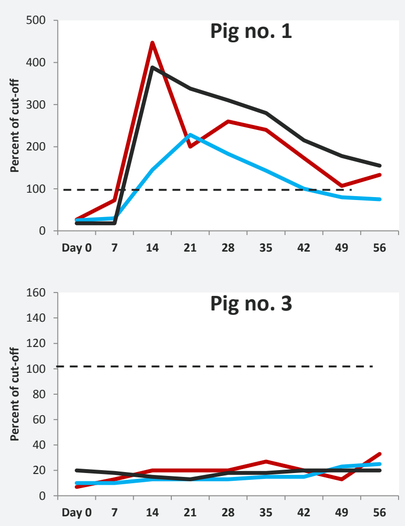


10^6 cfu



Individual pigs (examples)

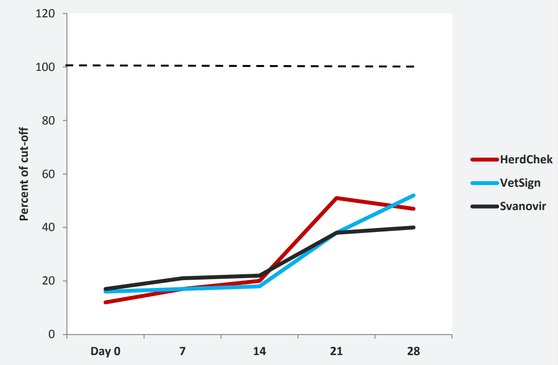




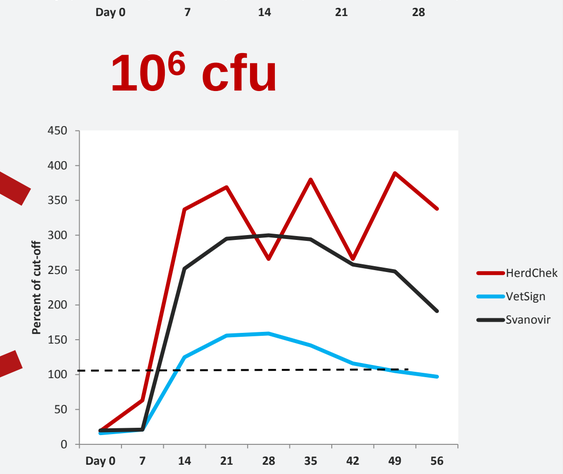
S Typhimurium

Group of six pigs (mean values)

10^3 cfu

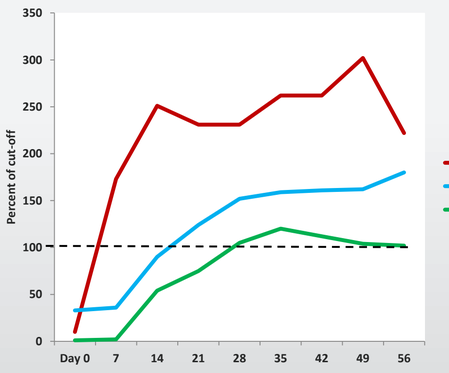


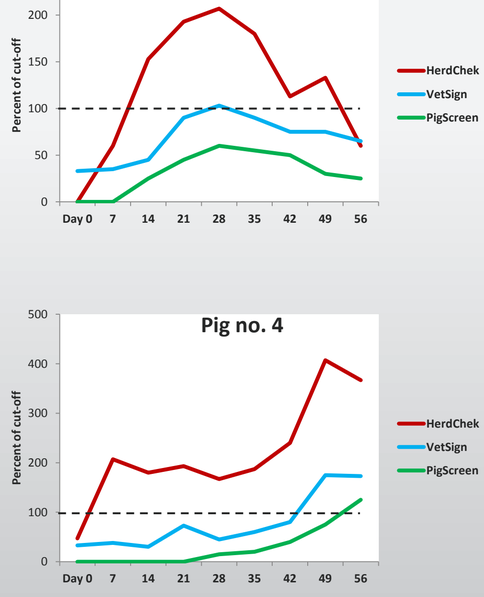
10^6 cfu

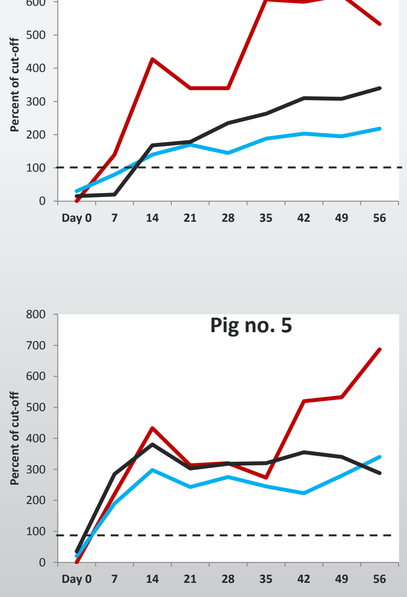


All mean levels passed cut-off in medium and high dose groups, but at different points of time.
Individual pigs within the same group showed different immuneresponses.

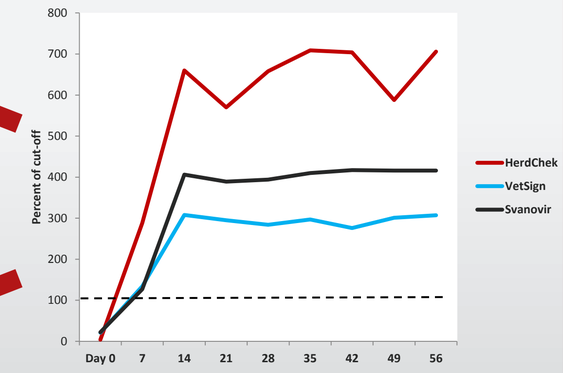
10^9 cfu







10^9 cfu



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