



A case of a severe *Salmonella* Choleraesuis outbreak in a sow herd in Poland

M. Porowski¹, M. Porowski¹, R. Panek², K. Lillie-Jaschniski³

¹Veterinary Clinic "Animal", Pobiedziska, Poland, ²Ceva Animal Health, Poland, ³Ceva Tiergesundheits, Germany



Background and Objectives

Pigs infected with *Salmonella* Choleraesuis (SCS), a swine adapted serovar, are often asymptomatic carriers. SCS can also lead to severe clinical signs in pigs including septicaemia, enterocolitis, and pneumonia (1). In humans SCS has a propensity to cause extraintestinal infections, but currently it was not related to human Salmonellosis outbreaks due to consumption of pork products in Europe (2). The pathogen has not been reported in Poland in swine for several years. This case describes a SCS outbreak in a closed herd in Poland with huge impact on pig health and production parameters.

Material and Methods

In March 2021 a 1060 sow herd experienced an outbreak of SCS. The clinical signs first appeared at the end of rearing and continued in early fattening. The animals showed severe diarrhoea, blue ears, ear necrosis and increased mortality. SCS was diagnosed as causal agent through necropsy. As antimicrobial treatment was not able to improve the situation, the responsible veterinarian decided to vaccinate suckling piglets twice orally with a *Salmonella* Typhimurium (Salmoporc, Ceva Animal Health) live vaccine at 3rd and 21st day, as no SCS live vaccine was available.



Picture 1.
Sepsis with *Salmonella* Choleraesuis

Results

Four batches of weaned piglets before and after implementation of vaccination (in total 4229 piglets) were compared. During the outbreak the farms mean losses in nursery were 5.9% and in fattening 7.8%. After the implementation of vaccination, the losses improved significantly ($p < 0.001$) to 2.3% in nursery and 3.3% in fattening. The average days from birth to slaughter which had increased to 210 days during disease improved to 178 days in vaccinated animals.

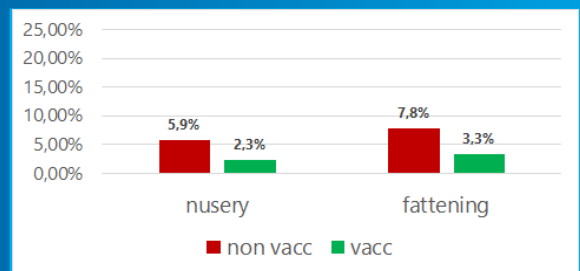


Figure 1. Mortality (%) before and after implementation of vaccination (* $p < 0.001$, Pearson's chi-square test)

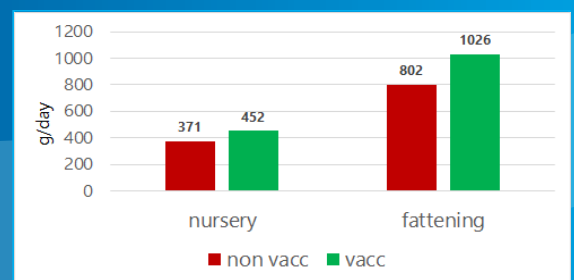


Figure 2. Average daily weight gain before and after implementation of vaccination

Discussion and Conclusion

The reported outbreak of *Salmonella* Choleraesuis lead to severe clinical signs and losses in nursery and fattening. The decision by the veterinarian to vaccinate the suckling piglets with a *Salmonella* Typhimurium live vaccine significantly reduced mortality and improved production parameters, leading to a shorter time from birth to slaughter.

References:

1. Bonardi, S. (2017). Epidemiol. Infect., 145, 1513–1526.
2. The European Union One Health 2020 Zoonoses Report, EFSA Journal 2021;19(12):6971