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TITLE

IMPLEMENTATION AND EVALUATION OF DIFFERENT ERADICATION STRATEGIES FOR SWINE DYSENTERY

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CONTENT

Background and Objectives:

Brachyspira infections are causing major losses to the pig sector and lead to high antimicrobial use. The present study aimed to implement and evaluate farm-specific elimination programs for *B. hyodysenteriae* in different infected pig farms.

Materials and Methods:

Eight pig farms infected with *B. hyodysenteriae* volunteered to implement an elimination program. The program was farm-specific and depended on the farm structure, the susceptibility of the isolated *B. hyodysenteriae* strain towards pleuromutilins, the housing and biosecurity conditions and the punctuality of the farmer. Monitoring for *B. hyodysenteriae* was performed by sampling pigs (PCR on pooled feces) every three months for one year after eradication.

Results:

The elimination program was successful in four farms. Two of them (single-site farrow-to-finish herd and finishing herd) had applied total depopulation. A third farm (sow farm) practised partial depopulation (stables remained empty for 4 weeks) and subsequently changed the source of the breeding pigs (purchased at 14 weeks). The fourth farm practised partial depopulation by temporarily selling the nursery piglets (stables remained empty for three weeks) combined with antibiotic treatment for 5 – 6 weeks.

Elimination failed in four farms. Two of them (farrow-to-finish and sow herd) tested positive already at the first monitoring. They had implemented antibiotic treatment for four weeks, but not all animals were treated and suggested measures were not implemented properly. The other farms (finishing herds) tested positive at the second monitoring. The purchased piglets might have been the infection source. There was a problem with rodents on one farm, and the other farm had a commercial installation to process manure from different sources.

Conclusions:

Taylor-made elimination programs for *B. hyodysenteriae* can be implemented successfully in different types of pig herds. Failures were mainly due to improper partial depopulation and/or not implementing the suggested biosecurity measures properly.