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Salmonella in breeding pig herds - differences between sows and weaned piglets

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Introduction

Salmonella spp. continue to be prevalent in the pig production chain in Germany. It was the purpose of this study to compare *Salmonella* isolates from sows and weaned piglets in breeding pig herds that were collected during a national monitoring program.

Methods

In the framework of a national monitoring program composite fecal samples were collected from sows and weaned piglets and tested for *Salmonella* according to ISO 6579. Isolates were serotyped and tested for antimicrobial resistance to 14 substances using broth microdilution in concordance with the prescriptions of Commission Implementing Decision 2013/652/EU. Only farms that provided samples from sows and weaners were included in the analysis.

Results

Overall, prevalence of *Salmonella* spp. in the herds was 14.4% (51/353 herds). It was higher in weaners (10.5%) than in sows (5.4%). While among sows *S. Derby* was the most frequently encountered serovar, *S. Typhimurium* was most prevalent in weaners. In only 5 of 353 farms included in the analysis *Salmonella* spp were found in both, sows and weaners. Moreover, in 4 of these farms serovars differed between the groups of pigs and in only 1 farm monophasic *S. Typhimurium* was detected in both populations. In concordance with the serovars, AMR was higher in isolates from weaners than in those from sows.

Conclusions

Using only two composite fecal samples probably provides only limited sensitivity for the detection of *Salmonella* in pig herds. Results indicate that the prevalence of *Salmonella* in breeding pig farms is a complex issue and that transmission of *Salmonella* from sows to weaners is not straightforward. Controlling *Salmonella* in breeding pig herds therefore requires a complex approach that addresses both, *Salmonella* in the sows and potentially independent circulation of *Salmonella* among weaners.