

40. Evolution of antimicrobial resistance of *Salmonella* isolates from pigs in Belgium

Brossé, C.¹; Peeters, L.²; Van Praet, W.¹; Pierré, E.¹; Vandenbroucke, V.¹; Boyen, F.³; Pasmans, F.³; Dewulf, J.²; Maes, D.²

The aim of the present study was to investigate the antimicrobial sensitivity of *Salmonella* isolates from pigs between 2011 and 2015. In total, 275 *Salmonella* isolates from samples originating from pigs sent in for diagnostic examination at Animal Health Care Flanders were tested for their sensitivity against different antimicrobials. Except for colistin, where the disk prediffusion test was used, the disk diffusion test was used. *E. coli* ATCC 25922 was used as reference isolate and the interpretative breakpoints were based on the Clinical and Laboratory Standards Institute.

Resistance of *Salmonella* against most aminoglycosides was low (max. 5.3%), except for spectinomycin. The percentage of isolates resistant to this antibiotic increased from 7% in 2011 to 18.7% in 2014. Paromomycin was not tested. The percentage of isolates resistant to colistin was low, but increasing as well. In 2011 and 2012 all tested isolates were susceptible, whereas in 2013 and 2014, respectively, 5.7% and 4% of the isolates were resistant. The percentage of isolates resistant to tetracyclines was rather high and varied between 46.6% and 61.4%. Similar results were found for sulfa-trimetoprim, except for the year 2012, when only 27.5% of the isolates were resistant. Resistance to ampicillin was high, on average 74% of the isolates were resistant, whereas resistance to amoxicillin-clavulanic acid, ceftiofur and cefquinome was rather low (3.5%, 2.3% and 1.6%, respectively). Only a few isolates were resistant to fluoroquinolones; 2.4% was resistant to flumequine and 1.1% was resistant to enrofloxacin. In 2014, 14.3% of the isolates showed resistance to florfenicol (previous years were not tested).

Compared to an earlier study in Belgium (Nollet et al., 2006), the resistance of *Salmonella* isolates to ampicillin and tetracyclines was markedly higher in the current study. Variation in resistance patterns between different *Salmonella* serotypes should be taken into account when interpreting these results.

¹Animal Health Care Flanders (DGZ), Drongen, Belgium;

²Faculty of Veterinary Medicine, Department of Reproduction, Obstetrics and Herd Health, Ghent University, Merelbeke, Belgium;

³Faculty of Veterinary Medicine, Department of Pathology, Bacteriology and Avian Diseases, Ghent University, Merelbeke, Belgium