Recovery of Salmonella enterica from seropositive finishing pig herds - DTU Orbit
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The aim of this study was to assess the probability of detecting Salmonella from pen faecal samples in seropositive classified finishing pig herds. The study involved 77 herds from Denmark (20), The Netherlands (20), Greece (17) and Germany (20). The serological herd status was determined by the blood-sampling of 50 finishing pigs. Bacteriological sampling was performed by 20 pen faecal samples per herd. Over-all, 47% of the blood samples had an OD% larger than 10 and 23% larger than 40. Salmonella was isolated from 135 (9.3%) pen faecal samples in 32 herds (42%). Twenty-eight of these herds (87.5%) had a within-herd seroprevalence larger than 50% at sample cut-off OD% > 10. In our study, there was an increasing probability of recovering Salmonella with increasing within-herd seroprevalence. However, this was only a moderate correlation. A correlation coefficient of 0.62 was found between the proportion of culture positive- and seropositive samples in a herd at cut-off OD% > 10 and of 0.58 at cut-off OD% > 40. Serology is a measure of historical exposure, which may or may not correlate closely to the microbiological burden at the time of sampling. Due to the low sensitivity of culture methods, apparent 'false-positive' serological results may well represent real infections not detected by bacteriological testing. For screening purposes, serological testing provides an indication of exposure to Salmonella, which forms the basis for targeted sampling, intervention and logistic slaughter procedures.

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