Herd factors associated with pneumonia and pleuritis in slaughter-aged pigs from farrow-to-finish pig farms
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A cross-sectional study was carried out in 143 farrow-to-finish herds to identify noninfectious factors associated with pneumonia and pleuritis in slaughter-aged pigs. Data related to herd characteristics, biosecurity, management and housing conditions were collected by questionnaire during a farm visit. Climatic conditions were measured in the post-weaning and finishing rooms where the slaughter pigs have been raised. A sample of 30 randomly selected finishing pigs per herd was scored for pneumonia and pleuritis at slaughterhouse. Herds were grouped into three categories according to their pneumonia median score (class 1: ≤0.5; class 2: 0.5<score≤3.75; class 3:>3.75). For pleuritis, a herd was deemed affected if at least one pig had extended pleuritis. Multinomial and binomial logistic regression models were used to identify factors associated with pneumonia and pleuritis, respectively. An interval of less than four weeks between successive batches, large finishing room size and high mean CO₂ concentration in the finishing room significantly increased the odds for a herd to be in class 2 for pneumonia. The same risk factors were found for class 3 and, in addition, a direct fresh air inlet from outside or from the corridor in the post-weaning room versus an appropriate ceiling above the pigs also increased the risk. The odds for a herd to have at least one pig with extended pleuritis was increased when the farrowing facilities were not disinfected, when tail docking was performed later than 1.5 days after birth and if the piglets were castrated when more than 14 days old. A temperature range of less than 5 °C for the ventilation control rate in the farrowing room, a mean temperature in the finishing room below 23 °C and large herd size were also associated with increased risk of pleuritis. All rearing steps from farrowing to finishing should be taken into account in any health programme aimed at controlling pneumonia and pleuritis.