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TITLE
MICROCLIMATIC MEASUREMENTS AS A TOOL FOR PRDC MANAGEMENT - A FIELD STUDY

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CONTENT
Introduction
The environment of the pig is a very important factor in the pathophysiology of the Porcine Respiratory Disease Complex (PRDC). Lots of publication report that in order to run a feasible strategy to improve the PRDC status on a farm, we have to measure and follow up the microclimatic parameters of the farm regularly and systematically.
Materials and Methods
A Hungarian swine farm with 2.000 sows had continuous problem with Actinobacillus pleuropneumoniae cases. We analyzed the layout of the farm containing every unit, and surveyed the most important environmental parameters of the stables: CO2, dust, humidity, temperature and lighting. This "environmental map" of the farm is used as background for the slaughterhouse lung scoring, and can help making the internal biosecurity more effective.
Results
Having this environmental map of the stables, we could check many important factors influencing the PRDC status of the farm. In summer the main environmental problem was the dust, and in winter the CO2 levels were dramatically high. In those units where seasonally there were big differences between the daily and night temperature, more pleuropneumonia cases occurred. Slaughter pigs from those buildings where continuously high CO2 and humidity levels were measured, had lungs with higher MADEC and SPES scores than the average. The nursery units with high humidity and CO2 levels owing to insufficient ventilation had more ear necrosis cases diarrhea and upper respiratory health problems (e.g. rhinitis, laryngitis and tracheitis).
Discussion and Conclusions
The environmental audits and the subsequent farm mapping helped planning the prophylaxis against PRDC. Surveying the parameters of the environmental conditions in the stables helped the communication with the farm managers, and it was easier to show the multifactorial nature of the PRDC to them.