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TITLE

STATUS QUO ANALYSES OF NOISE LEVEL IN PIG FATTENING UNITS IN GERMANY

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CONTENT

Background & Objectives

In fattening compartments, pigs and barn technologies are sources of noise. Since permanent noise can affect animal welfare, information on noise levels is important. The aim of the present study was to determine the sound levels in pig husbandry and consider various environmental effects as well.

Material & Methods

The study was carried out within the MultiViS-project as a general study framework to describe animal welfare both on-site and by general production data, based on around 200 German fattening farms. Within randomly selected compartments, the sound level was measured at the animals' body height. The equivalent sound level (LAeq) was recorded using a sound level meter (NTI Audio, Schaan, Liechtenstein). Multi-factorial analysis of variance was carried out considering sex, feeding system, ventilation, floor conditions, group size and number of pigs per compartment as fixed effects in order to detect potential influences on the noise level.

Results

The average sound level was 70.09 ± 4.23 decibels [dB] (Min 52.5, Max 92.4 dB). Pigs in the second half of the fattening period were louder than pigs in the first half ($p < 0.0001$). The feeding technique ($p < 0.0001$), floor ($p = 0.0047$), temperature ($p = 0.0023$), number of pens per compartment ($p < 0.0001$) and the interaction of number of animals per compartment and number of pens per compartment ($p < 0.0001$) showed statistical significant effects on the sound level.

Discussion & Conclusion

Except some outliers, the measurements were in the range of the limit of 85 dB (A) specified in the Directive 2008/120/EC. To determine welfare impacts of noise level additional analyses on environmental effects and other confounding variables is necessary.

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