

Spotlight

EmiMin – a contribution to compatibility in animal welfare and environmental protection



**Prof. Dr.
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Photo: private

In Berlin, June 26, 2018 the KTBL received from Federal Minister Julia Klöckner official notice of funding for the 5-year joint project “Emission reduction in livestock farming” (EmiMin), to be financed by the Agricultural Rentenbank from federal government special-purpose funds. This project excellently complements the already existing project “Determining emission data for assessing environmental effects of livestock farming (EmiDaT). The aim is to assess housing and equipment applications in cattle and pig production offering a significant reduction in emissions. Appropriate emission measurements are conducted according to the standardised VERA test protocol (VERA: Verification of Environmental Technologies for Agricultural Production). Depending on the process involved, the results should enable a calculation of emission reduction potentials applicable for the total housing system. All recorded data are stored on a dedicated platform that can be utilised for their evaluation and subsequent publication. With KTBL input, the total research data management will be structured as part-project of the “ZB MED – Informationszentrum Lebenswissenschaften” (Life Sciences Information Centre) and developed with the aim of archiving the project data in a research data bank with access offered to the interested public: a completely new concept of pilot character within agricultural science.

Investigated are innovative mitigation measures, some of them still not on the market in Germany. Evaluated in cattle production will be the emission reduction potential of modified low-emission flooring in dairy barns, in pig production liquid manure cooling and reduced slurry channel dimensions, the treatment of emitting surfaces with urease inhibitors and the separation of manure solids and urine with underfloor scrapers and perforated outlets. Measuring parameters are levels of emitted ammonia, odours, methane, CO₂ and further accompanying parameters such as wind speed and direction. Thereby, every tested mitigation measure will be continually investigated according to VERA recording protocols, over one year in six recording periods, each one week long. The research housings situated in various parts of Germany include systems with mechanical as well as natural ventilation. Hereby, the project profits from experience already gathered within the framework of the EmiDaT work.

Both projects together will ensure availability of scientifically substantiated data for the first time, not only for conventional housing systems with forced ventilation but also for welfare-based housing systems with natural ventilation. Applying this concept means livestock housing in Germany can be assessed on a differentiated basis as, for instance, is relevant in planning/building permission procedures. Especially natural ventilated housing systems for cattle and pigs, experiencing higher accept-

ance by society, can in such cases substantially improve their emission balances through application of emission reducing techniques which in certain cases can be retro-fitted.

Reliable data for emissions from livestock housings are indispensable to environmentally compatible livestock production in Germany whereby animal welfare and environmental protection are no longer played off one against the other. Instead, a comprehensive overview can be presented which, in the final analysis, is the best basis for society negotiating the priorities to be set.



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