

REDUCTION OF HARMFUL GASES EMISSIONS IN PIG FARMING THROUGH NUTRITION

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Abstract

Emissions of harmful gases are a long-term problem in livestock farming. In pig farming, these are mainly ammonia, carbon dioxide, methane and hydrogen sulfide. These gases are mainly released from pig faeces and urine. They have a negative impact not only on the barn environment, but also on the performance and health of animals and on the health of staff working in the stable (Hossain et al., 2024). Currently, various methodologies are being promoted that contribute to improving the stable environment, animal health and improving performance. The largest part of the measures are technological measures in the stables, manure removal systems, manure storage, manure acidification, and the use of air scrubbers. The production of harmful gases includes enzymatic, microbial and chemical reactions that convert feed mixture or organic materials into gases. There is growing interest in developing appropriate and effective methods to reduce gas emissions in pig farms. One such approach is nutritional management, which involves manipulating the pig ration to reduce the production of gas-forming compounds in the large intestine. This can be achieved through strategies such as limiting the intake of fermentable carbohydrates or increasing the intake of indigestible fiber. Overall, reducing gas emissions in pigs is a complex process. One approach that has shown promise is the use of feed additives. These additives may include the use of probiotics, prebiotics, enzymes, and medicinal plants (Rowland et al., 2018; Park et al., 2018).

Key Words: Pig; gas emissions; nutrition