

Assesment of methane emissions from animal and waste processing operations using an inverse dispersion technique

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Inverse dispersion techniques are becoming more important in determining gas emissions from animal and waste processing operations (AWPO). The application of this method requires for a horizontal, flat and homogeneous surrounding without any nearby sources of the gas. However, these criteria are rarely met in countries like Switzerland. The present PhD aims to evaluate and establish inverse dispersion technique using a backward Lagrangian stochastic (bLS) model with up and downwind concentration measurements for the determination of methane emissions from AWPO at an environmental scale under non-ideal model conditions. This poster presents the applied method and the planned measurements which contribute to tackle the related challenges.

REFERENCES

Flesch, T., Wilson, J.D., Harper, L.A., Crenna, B.P. 2005: Estimating gas emissions from a farm with an inverse-dispersion technique, Atmospheric Environment, 39, 4863-4874.