

Project Summary

Chicken farm odour modelling

Tracy Freeman
Air Quality Professionals
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Summary

Any application to build new, or expand existing, poultry farms requires modelling of the potential odour emissions to surrounding areas, to inform the extent of the potential impact of the new facilities to neighbouring properties (which may be farming operations or residential buildings). However, the robustness of the modelling used may be questioned if the application is approved, but odour complaints still arise, which will impact on future applications and, ultimately, the ability of the industry to expand operations.

The aim of this project is to improve confidence in odour modelling results for tunnel-ventilated meat chicken farms (the main shed-type used in the industry) by comparing model results with actual known odour impacts for multiple existing farm sites. These farms have been selected through consultation with industry and the State Government, and the project will involve a small amount of field work on-site.

The aim is to establish a monitoring site that provides data to inform the odour models, as well as monitor the rates of ventilation and ventilation patterns used on existing farms (which informs when odour emissions might peak). The primary output of this project is expected to be a review of odour modelling methodologies for tunnel-ventilated chicken meat farms, including alternative odour emission estimation methodologies and a review of the various assumptions used to inform the modelling.

Contact

Tracy Freeman
Air Quality Professionals
tracy@airqp.com.au

Georgie Townsend
Extension Officer
georgina.townsend@agrifutures.com.au



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Related research

- PRJ-010619: Summarised findings from Australian poultry odour research (2006-2017)
- PRJ-009910: Addressing odour abatement and assessment knowledge gaps using PTR-TOFMS
- PRJ-009544: Broiler Farm Odour Dispersion Modelling from AERMOD, AUSPLUME and CALPUFF



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