

Agricultural Greenhouse Gas Inventory Research Programme

A 5-year research programme (2010-2015) has been funded by the UK government to generate new country-specific measured and modelled Emission Factors for methane (CH₄) and nitrous oxide (N₂O) from agriculture. This will build on previous research, combining field experimentation, modelling and scoping of data sources to fill knowledge gaps.

The main objective of the research programme is the development of an improved Agricultural Greenhouse Gas Inventory reporting tool for the UK, that uses appropriate country- and practice-specific emission factors and that will reflect the adoption of mitigation practices by the agricultural industry, enabling forecasting and monitoring of performance against target emissions reductions set by the UK Climate Change Act 2008.



This research is being delivered by a partnership of 16 institutes and universities through four linked projects (AC0112, AC0114, AC0116 and AC0116)

UK Experimental Evidence on baseline gaseous emission factors and the effectiveness of changes in farm practice in reducing N₂O emissions from soils and CH₄ emissions from livestock will be collated and reviewed with the aid of **Computer Modelling** to derive a UK specific Inventory calculation methodology.

Farm Practice Survey data driving the Inventory calculations will be collated from both government and industry sources. These will include data on fertiliser and manure management, livestock breeding and feeding regimes, and the adoption of potential mitigation practices.

Soil Drainage and Climate factors affecting emissions factors will be mapped, enabling the Inventory calculation to take account of regional patterns of intrinsic risk of gaseous emissions.

Agricultural Production and Business data, including the June Agricultural Survey and Cattle Tracing System, will be used to develop a methodology for reporting and tracking changes in emissions by sector and farm system.

Uncertainty Analyses will be carried out on the improved Inventory to measure our confidence in forecast changes in gaseous emissions, and to help target and communicate the need for industry action.

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