

Agricultural Greenhouse Gas Inventory Research Programme

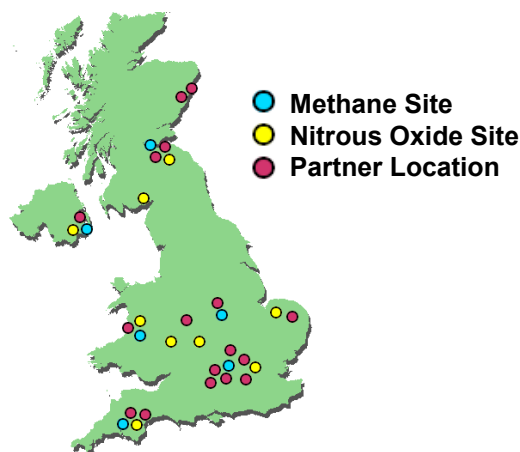
A 5-year research programme (2010-2015) has been funded by the UK government to generate new country-specific measured and modelled Emission Factors for methane (CH₄) and nitrous oxide (N₂O) from agriculture. This will build on previous research, combining field experimentation, modelling and scoping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

Nitrous oxide emissions from fertiliser, manure and urine applications to soil will be measured using **Static Chambers** and **Eddy Covariance** methods.

Methane emissions from animals (enteric fermentation) and manures will be measured using **Respiration Chambers** and the **SF₆** technique.

Measurements will be conducted for representative livestock breeds and production systems, manure storage systems, and on contrasting soil types and climate situations in the UK:



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

Measurements will provide essential evidence for UK specific emission factors and **Model Verification** – with some potential mitigation practices also being trialled.

Measured emissions will be **Upscaled** and **Verified** at regional and national scales using computer modelling.

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