

One day workshop

# Global ReseArCH<sub>4</sub> inveN<sub>2</sub>Ory

31st October 2011

A UK workshop on agricultural greenhouse gas measurement methodologies and techniques to support the work of the Global Research Alliance (GRA)

At the University of Reading Centre for Dairy Research, Reading, UK



This UK initiated workshop provides an opportunity for academics and industry to demonstrate techniques and technologies used to measure GHG emissions from agriculture, with the aim of improving national inventories and developing mitigation strategies. It allows delegates from around the world to learn about and see the technologies in use, and understand their application and limitations.



This UK initiated workshop supports the GRA aims:

- To increase international cooperation
- Investment in research activities to help reduce the emissions intensity of agricultural production systems.



The Alliance promotes an active exchange of data, people and research to help improve the ways that agricultural greenhouse gas research is conducted, and to enhance participating countries' scientific capability.

**The University of Reading Centre for Dairy Research (CEDAR)**  
Hall Farm, Arborfield, Reading, UK  
RG2 9HX

Please note this workshop is a free event, however delegates must register beforehand and are expected to cover their own costs of travel & accommodation.

**TO REGISTER PLEASE CONTACT ADAS BY 30<sup>th</sup> SEPTEMBER 2011:**

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# PROVISIONAL PROGRAMME

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## 10.00-10.30: Registration & Coffee

### 10.30-11.00: Introduction:

Challenges to GHG Inventory improvement

*Mike Roper, Defra, UK*

The Global Research Alliance (GRA), the case for harmonised methodologies.

*Harry Clark, NZ Agricultural Greenhouse Gas Research centre, NZ*

## 11.00-13.00: Parallel Speaker Sessions -----

### **Measuring GHG Emissions from Livestock**

**Chair: Chris Reynolds, University of Reading, UK**

UK harmonisation of SF6 techniques.

*Francis Lively, AFBI, UK*

Design guide for a low cost method of monitoring small animals.

*Jon Moorby, Aberystwyth University, UK*

Online measurement of methane from dairy cows during milking.

*Phil Garnsworthy, Nottingham University, UK*

Pilot investigation of a mobile sampling system for methane emissions from ruminants.

*Dave Ross, SAC, UK*

Proxy measures of methane, novel techniques in development.

*John Newbold, Provimi, Belgium*

### **Measuring GHG Emissions from Soil & Manure**

**Chair: Alan Franzluebbers, USDA, US**

GRA protocol for measuring N2O emissions.

*Cecile de Klein, AgResearch, NZ*

Measurement of ammonia emissions from agricultural sources. .

*Tom Misselbrook, North Wyke Research, UK*

A new portable infrared laser spectrometer for field measurements of N2O & CH4 emissions.

*Agnes Grossel, INRA, France*

Measurement of N2O emissions from field drainage.

*Kevin Hiscock, University of East Anglia, UK*

Fast box methodology for rapid N2O flux measurement.

*Daniela Famulari, Centre for Ecology & Hydrology, UK*

## 13.00-14.00: Buffet Lunch

## 14.00-16.00: Field Demonstrations of Techniques & Technologies-----

**Foreword by Jim Paice MP, Minister of State for Agriculture and Food, Defra**

Calorimetry Chambers

The SF6 technique

Breath sampling techniques for static and ambulatory animals

The C-lock system for methane sampling

Portable infrared laser spectrometer for field measurements of N2O & CH4 emissions.

More demonstrations to be confirmed

## 16.00-16.15: Closing speaker (TBC)

## 16.15- 16.30: Coffee & Depart

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