Advancing CSA solutions through global collaboration: The Global Research Alliance on Agricultural Greenhouse Gases

Harry Clark\textsuperscript{1} and Martin Scholten\textsuperscript{2}

\textsuperscript{1}NZAGRC  \textsuperscript{2}Wageningen UR

Montpellier
March 16-18, 2015
Initiated 2009, Established 2011

GHG emissions by sector, 1990-2011 average

- Enteric fermentation: 40.1%
- Manure left on pasture: 15.2%
- Manure applied to soils: 2.6%
- Rice cultivation: 10.1%
- Synthetic fertilizers: 11.9%
- Burning of crop residues: 0.5%
- Burning of savanna: 5.2%
- Crop residues: 3.0%
- Cultivation of organic soils: 0.8%

Source: U.N. Food & Agriculture Organization.
Mission

45 Members and Partners

• brings countries together to find ways to grow more food with lower emissions
• by improving global cooperation in research
• to support farmers, policies and other international organizations
Organisational structure

RESEARCH GROUPS

livestock
croplands
paddy rice

Inventory & Monitoring

Soil Carbon & Nitrogen cycling
Co-chairs:
Harry Clark (NZAGRC), Martin Scholten (Wageningen UR)

Livestock Research Group Activities

- six global research networks
- collaborative research projects
- joint funding mechanisms
- measurement of best practice guides
- technical manuals/info sharing
- standardisation of techniques
- understand current capacity
- link members
- six global research networks
- databases/data sharing
- harmonised data reporting
- partners to scale up and widen reach
- cross-country experience sharing
- document synergies/Farmer...
Collaborative Research Projects (Livestock Research Group)

Understand global rumen microbial community diversity

Accelerate discovery of methanogen-specific inhibitors

Identify naturally low methane-emitting animals

Develop nutrition-related mitigation strategies

Model intercomparison/evaluation of N$_2$O mitigation strategies
Capability development

LEARN, BORLAUG, GRASS awards
- Technician
- PhD
- Post doctoral
- Senior scientist exchanges

Technical training courses
- N₂O measurement, Chile
- CH₄ measurement, S. Africa, New Zealand, S. America

Improved agricultural GHG inventories
- S. America
- S.E. Asia
Impact

2007

livestock’s long shadow
environmental issues and options

2010+

Livestock Research Group

2013

TACKLING CLIMATE CHANGE THROUGH LIVESTOCK
A GLOBAL ASSESSMENT OF EMISSIONS AND MITIGATION OPPORTUNITIES

Reducing greenhouse gas emissions from livestock: Best practice and emerging options

CLIMATE-SMART
Agriculture
2015
Reducing GHG emissions from livestock mitigation options.
International partnering
International partnering
*manure management*
International partnering

*paddy rice - AWD*

2013-14 Dry season, Pati, Indonesia
International partnering

enteric fermentation
Become Engaged

Update from the Co-Chairs

The year has started at a quick-pace for the LRG with the launch of the first multi-country joint research call hosted by the EU FACCE-JPI on agricultural greenhouse gases. Many LRG member countries spent the opening months of the year urging global collaborations and developing project proposals, the call closed at the end of March 2015. The Selection Committee, on the heels of the Council meeting, is considering the greenhouse gases and animal agriculture (GGA) conference being held in Dublin June 22-24. The GGA is the largest gathering of scientists in the field and more than 400 scientists are expected to attend. Many projects currently conducted through the LRG will be presented at the conference. The Co-Chairs will meet on 27 June.

www.globalresearchalliance.org
secretariat@globalresearchalliance.org