

Work so far of the Manure Management group of the Global Research Alliance

Paul Vriesekoop

Manure management workshop 3-5 September 2012,
Rome , Italy

Content of presentation

- From GRA, Livestock Research Group to manure management group (MMG)
 - 1,5 year of history of MMG without meeting but with members, stocktake and reports
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Collective Vision of GRA

Increase agriculture production with lower emissions

Feeding the world while caring for the environment

Improve global cooperation in research

Accelerate/strengthen knowledge and technology development that would not happen without the Alliance, with a common research agenda, joint capacity building

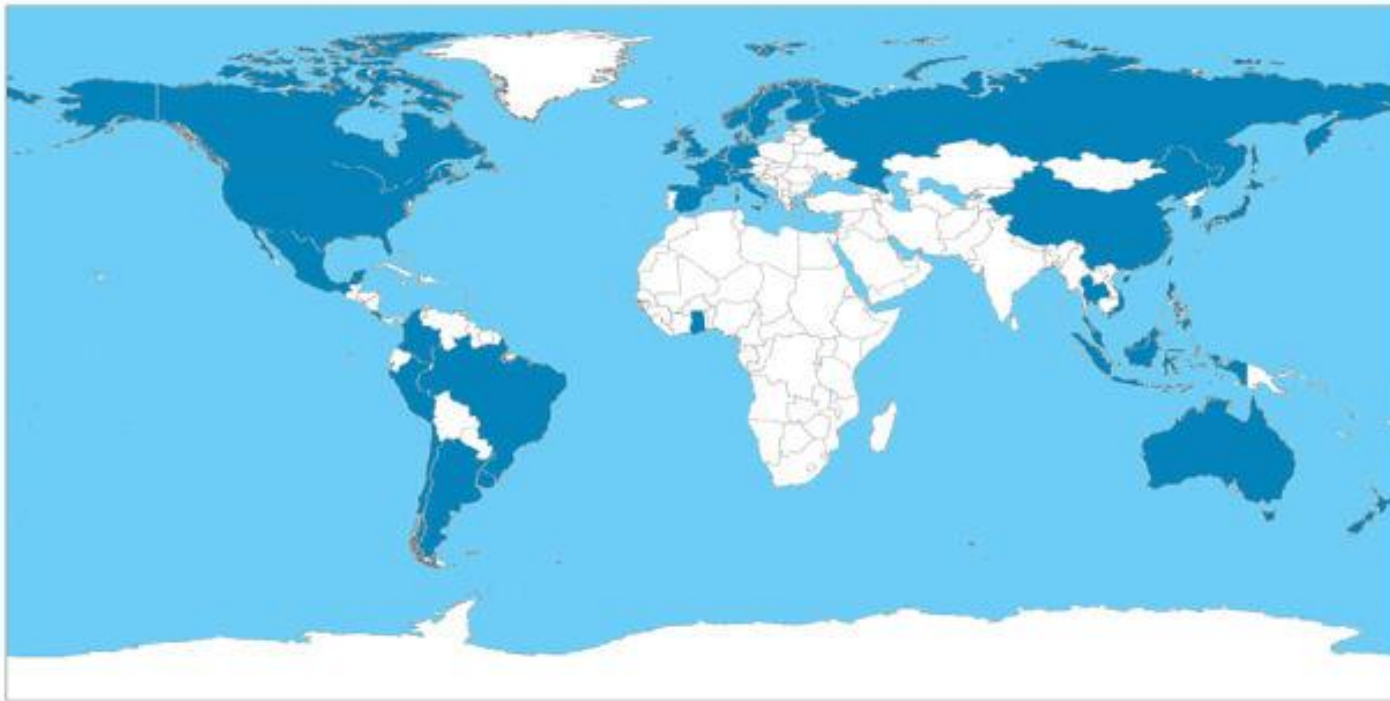
Work with farmers and partners to provide knowledge

Develop relevant mitigation options while increasing the resilience of food production systems

Members GRA

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33 Countries are Members of the Global Research Alliance

Cross-cutting Groups

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Research



Livestock



Croplan

**Inventory and
Measurement**

ea

**Soil Carbon and
Nitrogen Cycling**

up



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Livestock Research Group

Co-chairs: Martin Scholten (Wageningen UR), Harry Clark (NZAGRC)



Livestock Research Group

Support: Jac Meijs ((Wageningen)
Victoria Hatton (NZAGRC)
Andy Reisinger (NZAGRC)

Ruminant Working Group



Co-Leaders: Harry Clark (New Zealand) and Veronica Ciganda (Uruguay)

Members: All members of the LRG are also members of this working group.

Focus: Addressing emissions from housed and grazing ruminants (CH_4 from enteric fermentation, N_2O from urine deposited on soils, and soil carbon stored under pastures and feed crops). Manure management issues are covered by the non-ruminant group.

Non Ruminant Working Group



Co-Leaders: Paul Vrieskoop (The Netherlands) and La Van Kinh (Vietnam)

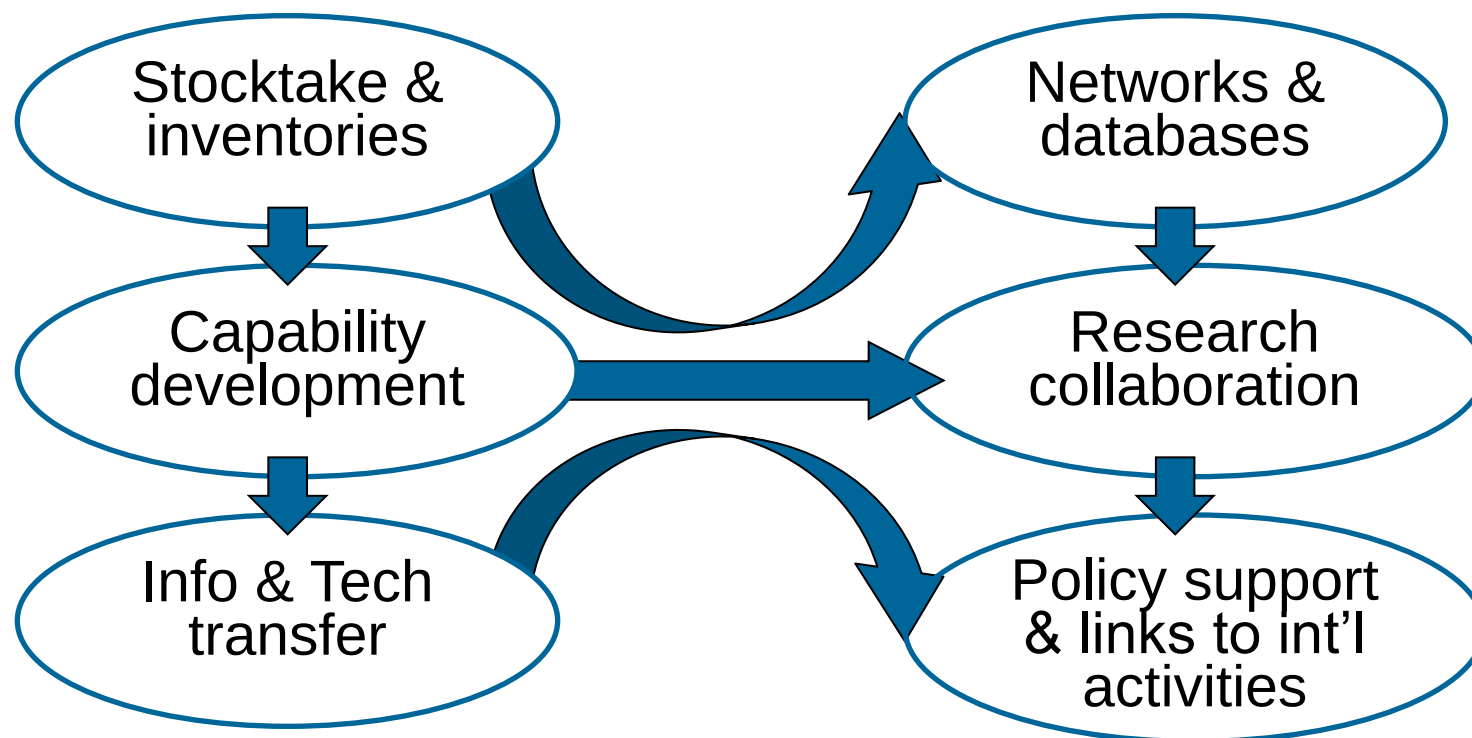
Participating countries: Colombia, China, Denmark, Finland, France, Germany, Japan, Korea, Malaysia, Mexico, the Netherlands, UK, USA and Vietnam

Focus: Manure management for both non-ruminants and ruminants. Manure is the biggest source of emissions from non-ruminants.

From stocktake toward scientific support to policies

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Common understanding Concerted actions

Research Networks

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Livestock – Research Networks

Rumen Microbial Genomics (RMG)



NZ lead with 40+ members; second meeting in June 2012 (France)

Animal Selection Genetics and Genomics (ASGG)



NZ/Australia lead; 30+ members; 2nd meeting July 2012 (Australia)

Feed and Nutrition



Switzerland lead with 20+ members; first meeting in September 2012 (Switzerland)

Manure Management



The Netherlands lead with 17 members; first meeting in September in conjunction with Livestock Dialogue and FAO

Animal Health and GHG intensity (under development)



UK lead; initial scoping meeting mid-June 2012 (Bangkok)

Manure management group

- Co- coordinator La Van Kinh Vietnam; start of group January 2011 via Internet
 - 2011: stocktake LRG on headlines; reports in LRG meetings in March (Versailles) and November (Amsterdam)
 - 2012: contribution to regional workshops of LRG in March (Thailand) and September/Okttober (Kenia/Ghana); first meeting in Rome; reporting in LRG meeting in November (Uruguay)
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Slide Versailles meeting: What has been done?

Stocktake delivery has been organised

4 times there has been e-mail contact with the participants on:

- > who will participate and what to do
 - > reminder of the stocktake
 - > reminder of the meeting in France and who would come and main line of thinking in the respective countries
 - > sending of stocktake, selection of non-ruminants research, outline of a paper
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Slide Versailles meeting: Action plan

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Review the global stocktake

Discuss the outcome(s)

Organise a website discussion within the group

Work on an integrated paper with the whole group

**Get fast growing non-ruminant production countries
on board**

**Identify the new projects within the group and cross
sell these**

Slide Amsterdam meeting: Conclusions stocktake

Africa, W Asia, E Europe and S America are largely missing in the stock take

- Includes significant producers of poultry meat & pork

The stock take tends to be biased towards publicly-funded projects

- Easier to find

In both ruminants and non-ruminants, the emphasis is on emissions from stored manure

Slide Amsterdam meeting

Concluding Remarks

Chadwick/Mosquera (1)

Manure management major source of N_2O & CH_4

Choice of system is a major influence; slurry vs FYM

Manure treatment can have a major effect

Emissions from spreading effected by: manure type,
application method and timing

Important to consider impacts of management
practices on whole system losses and 2° impacts

Slide Amsterdam meeting

Concluding Remarks

Chadwick/Mosquera (2)

Manure management offers an opportunity to reduce GHG emissions

Efficient manure nutrient use

- reduces reliance on 'bagged' fertilisers
- reduces energy in producing 'bagged' fertilisers
- reduces diesel use in applying fertilisers
- reduces direct and indirect N₂O losses (less N applied)

Biogas generation:

- reduces CH₄ emissions from manure stores
 - offsets fossil fuel use to generate electricity
 - reduces organic matter to landfill
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Regional workshops of LRG

- SE-Asia in March: manure management important topic; cooperation with La Van Kinh Vietnam; presentations and report are available
 - Kenya in September; Ghana in Oktober: program in development
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