

Manure Management Network – Research Update 2023

Focused on reducing GHG emissions from livestock production and increasing the nutrient use efficiency of manures and soil organic matter by the improvement of excreta management.

Tony van der Weerden

(co-chair of Manure Management Network)



DATAMAN database completed



www.dataman.co.nz

Received: 13 July 2020 | Accepted: 9 December 2020 | Published online: 22 January 2021
DOI: 10.1002/jeq2.20186

Journal of Environmental Quality

DATASETS

DATAMAN: A global database of nitrous oxide and ammonia emission factors for excreta deposited by livestock and land-applied manure

Received: 29 April 2022 | Accepted: 20 October 2022
DOI: 10.1002/jeq2.20430

Journal of Environmental Quality

DATASET ARTICLE

DATAMAN: A global database of methane, nitrous oxide, and ammonia emission factors for livestock housing and outdoor storage of manure

Field

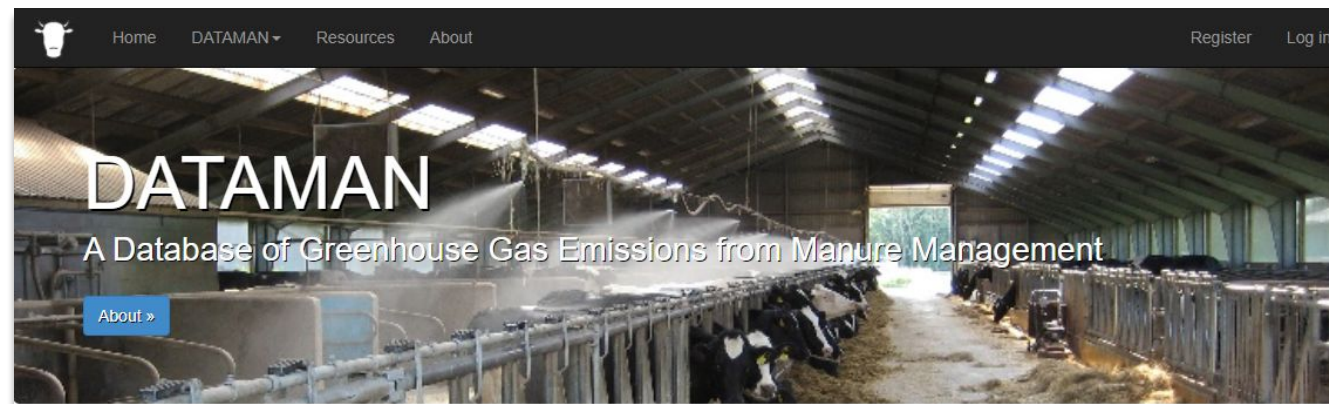
184 papers
~ 5600 EF values

Storage

239 papers
~ 1300 EF values

Housing

263 papers
~ 2000 EF values



DATAMAN database completed



www.dataman.co.nz

Home DATAMAN Resources About Register

Publications

2023: Rychla et al. 2023, Journal of Environmental Management.
[Costs and effects of measures to reduce ammonia emissions from dairy cattle and pig production: A comparison of country-specific estimations and model calculations](#)

2023: van der Weerden et al. 2023, Science of the Total Environment (open access).
[Influence of key factors on ammonia and nitrous oxide emission factors for excreta deposited by livestock and land-applied manure](#)

2023: Hassouna et al. 2023, Journal of Environmental Quality (open access).
[DATAMAN: A global database of methane, nitrous oxide, and ammonia emission factors for livestock housing and outdoor storage of manure](#)

2021: Webb et al. 2021, Carbon Management (open access).
[Guidance on the conversion of gaseous emission units to standardized emission factors and recommendations for data reporting.](#)

2021: van der Weerden et al. 2021, Journal of Environmental Quality (open access).
[Ammonia and nitrous oxide emission factors for excreta deposited by livestock and land-applied manure](#)

2021: Beltran et al. 2021, Journal of Environmental Quality (open access).
[DATAMAN – a global database of nitrous oxide and ammonia emission factors for excreta deposited by livestock and land-applied manure](#)

The end of the beginning: Version 1

Huge international effort!

Still keen to expand further

Get in touch if you wish to contribute or analyse data

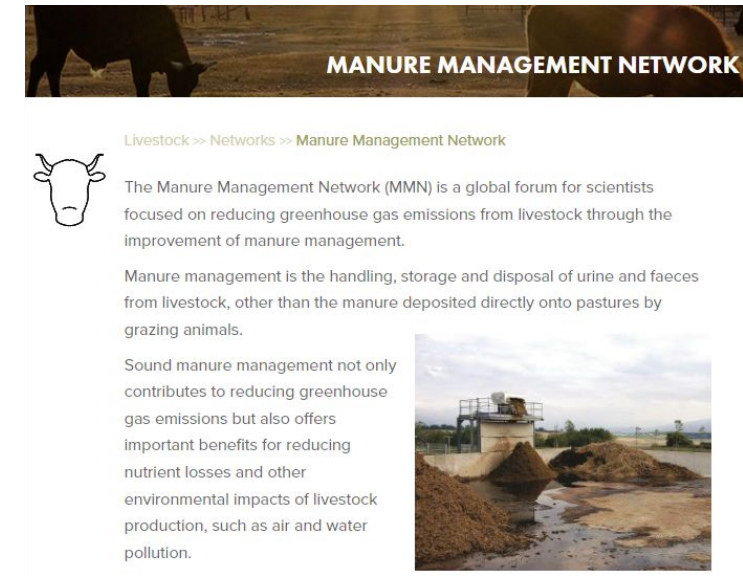
Stocktake of GHG Manure Management projects completed

Purpose of stocktake

1. Identify potential collaborators, knowledge experts in terms of methodologies or research topics
2. Awareness of current research efforts and focus: useful for strategic gap-filling

- Collation of key information on current CH₄, N₂O and NH₃ measurement, mitigation and modelling research projects.
- Access via GRA MMN webpage.

- Relies on contributions from Network members
- Aim to update annually
- Get in touch if you want to lead or assist



Activities:

The MMN has completed a stocktake of GHG manure-related research projects from across member countries.

Click [HERE](#) to download an excel file of the stocktake.

Want to get involved?

- Co-chair of MMN
- Expand DATAMAN database via contributing data
- Lead or assist with annual stocktake of projects
- Assist with updating experimental protocols for housing and storage measurements
 - contact Melynda Hassouna (INRAE)
- Lead the development of rapid on-farm tests for manure nutrient supply
- Flagship ideas
 - Improving Methane Emissions Estimates from Manure (new)
 - Expand Manure GHG data from developing countries (new)
 - Bio-based fertilisers – development of low-cost approaches (last year)