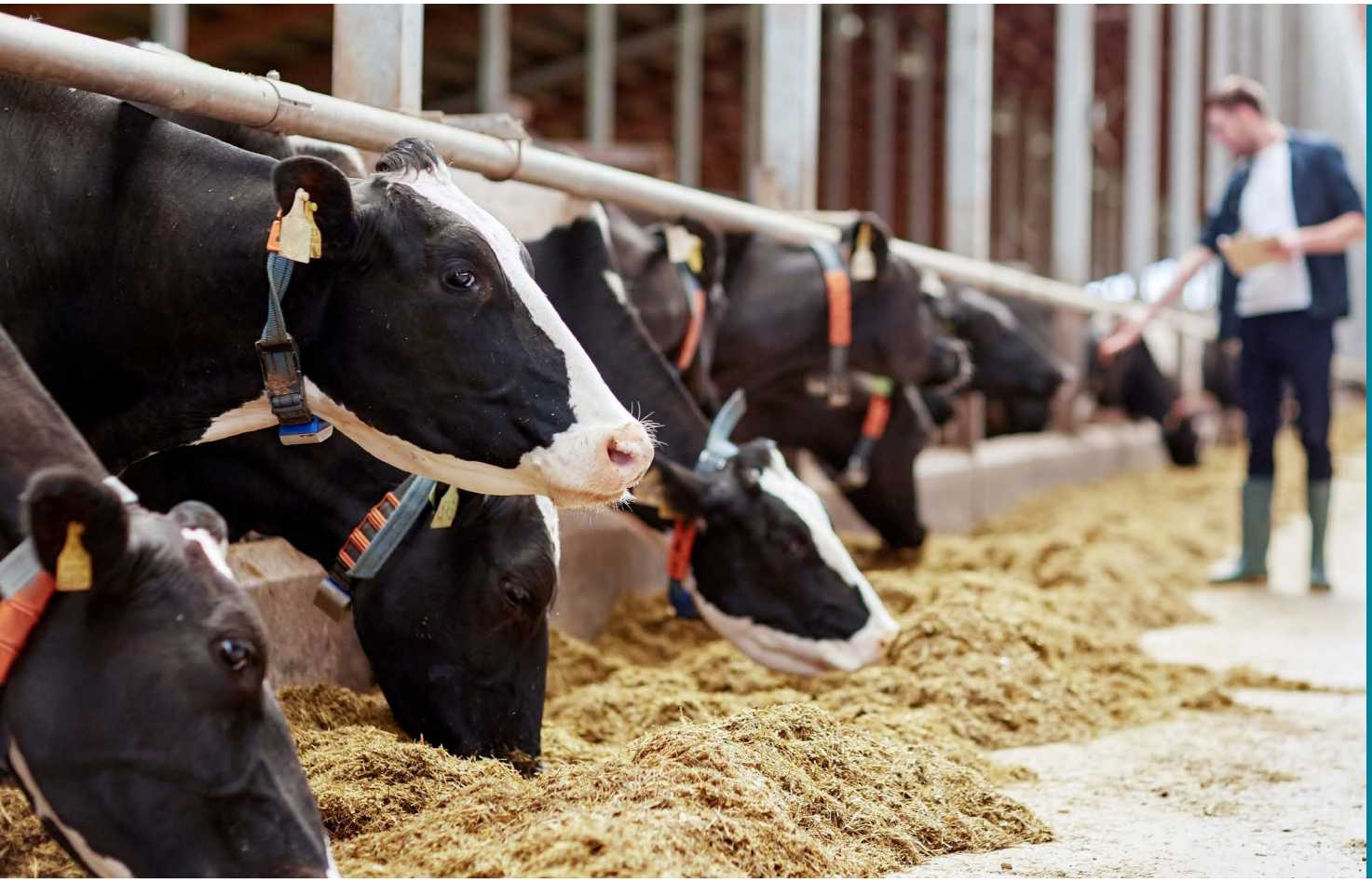
MiLCA

Protocol for including
Mitigation actions in
Agricultural Lifecycle Assessment



Background

The global dairy sector through its “net zero” ambitions is actively pursuing research and grass roots practice change to achieve the required emissions reductions.

Numerous dairy organizations, globally are proactively quantifying and reporting their value chain carbon footprint to better understand the greatest actionable mitigation opportunities and how to implement these with their supplying farmers.

There are many mitigation strategies or technologies, though capturing and incorporating the outcomes of the implementation of these in carbon footprint calculations is currently challenging.

Although there are established protocols for calculating the carbon footprint of dairy production, there remain two main gaps limiting progress:

- Robust scientific evidence standards that ensure the efficacy and associated mitigation claims for existing and new technologies. i.e. What evidence is required before a mitigation lever is ‘scientifically’ considered to result in a specified claim in the reduction on the carbon footprint.
- How the outcome of any technology can be included and reflected in carbon footprint calculations.

Objective of this project

For the ruminant sector to effectively deliver its ambitious GHG reduction commitments, it is important that proven technologies are part of the emissions mitigation toolbox. The dairy industry's adoption and implementation of existing and new technologies to reduce its carbon footprint requires that accounting of reductions is undertaken in a robust and responsible way. As a result, several dairy organisations have pooled resources to solve this challenge.

One of the emerging and most promising mitigation levers to reduce the carbon footprint of dairy production is methane inhibitors[1]. Although products that promise decreases in enteric methane are available in the marketplace and many on farm trials are being undertaken, dairy companies are not currently including the associated emissions reductions in on-farm carbon footprint calculations.

This project will develop and test and validate a robust protocol that will be applicable for on-farm GHG mitigation technologies, starting with methane inhibitors.

Collaborating with aligned efforts

This project carefully monitors and aligns with other similar scientific efforts in this important area of work, in particular with the Global Research Alliance (GRA) Flagship Project: Feed Additives to Reduce Methane which predominantly aims to support the development of effective methane inhibiting additives, reduce the time required to get these products to market and included in national inventories and the provision of technical guidelines to standardise the experimental methods when developing new additives. The Co-Chairs of the GRA project are members of the MiLCA Steering Group.

Outcomes/Deliverables

MiLCA aims to develop a protocol that describes the required evidence base for a mitigation technology to be included in a product lifecycle analysis or on-farm carbon footprint calculations with a high level of confidence that the claimed benefits (across all agricultural GHG's) have been realised.

Science based approach

The protocol will align where appropriate with methodologies used in national GHG emissions inventories, but there is no expectation that the protocol will be identical to methodologies used in National Inventory Reporting.

To deliver on the objectives, the project funders have contracted an Australian partnership – The New South Wales (Australia) Department of Primary Industries, The University of Melbourne and Life Cycle Strategies Pty. Ltd - to deliver the project in a scientifically robust manner.

Transparency/ Timelines

Prior to release for a public and scientific review period, the protocol will undergo a robust process of testing and evaluation. The completed protocol will include case studies that demonstrate its application and validates the efficacy of the approach.

Project timelines:

- Development phase
  June 2023 – February 2024
- Public Consultation
  March/April 2024
- Review of consultation feedback
  May/June 2024
- Release of Protocol
  September 2024

1 Methane inhibitors includes any feed additives that reduces enteric methane emissions and also includes vaccination against methanogens.

Project collaborators

Partner organization