



NATIONAL LIVESTOCK METHANE PROGRAM

FACT SHEET

The National Livestock Methane Program has been developed to provide Australian livestock producers with practical strategies and tools to help them increase productivity and profitability and at the same time lower methane emissions.

It will also provide the scientific basis for the development of methodologies under the Carbon Farming Initiative and the future Emissions Reduction Fund, potentially allowing producers to claim carbon credits for adopting new practices.

The program consists of 17 projects grouped into six streams:

- Measurement of methane (3)
- Genetics (1)
- Supplements (6)
- Forages (4)
- Rumen microbiology (2)
- Coordination of the program (1)

These projects commenced June 2012 and will run until June 2015.

Examples of research

NLMP research has already made major contributions to develop strategies and tools to help livestock producers reduce methane and improve productivity, with research into:

- **Breeding:** identifying 'high' and 'low' methane emitting cattle, and developing Estimated Breeding Values (EBV) and \$Index values so producers can select bulls whose progeny will produce less methane but still be profitable in their production system.
- **Supplementation:** evaluating the impact of pasture cultivars and supplements on methane emissions, and identifying feed additives such as algae, grape marc and nitrates that reduce energy waste in the rumen.
- **Rumen strategies:** developing a rumen bolus to measure methane and other gases in the rumen, and better understanding rumen biology to lower methane and improve feed utilization

- **Forages:** identifying best shrub and inter-row species for reducing emissions; use of leucaena plantations in northern Australian cattle production systems to reduce methane emissions.

-2-

The NLMP is a collaborative and nationally recognised research program for reducing methane emissions from livestock with support from the wool and dairy industries of Australia.

The program builds on previous research initiatives aimed at reducing methane from livestock, including the Australian Government's Reducing Emissions from Livestock Research Program (RELRP), which ran from 2009 to 2012.

The NLMP is funded by the Department of Agriculture. It is managed by MLA and receives support from the following collaborating organisations:

- Australian Wine Research Institute
- Australian Wool Innovation
- CSIRO
- Dairy Australia
- Department of Environment and Primary Industries, Victoria
- Department of Primary Industries, New South Wales
- Ridley AgriProducts
- Royal Melbourne Institute of Technology
- University of New England
- University of Western Australia
- MLA is coordinating the program on behalf of, and in partnership with, the Commonwealth Government.

For more details on NLMP projects and collaborators, please visit www.mla.com.au



BACKGROUND FACTS

The link between ruminant biology, methane and productivity

When cattle and sheep digest feed, between 2-10 per cent of the feed energy they consume is lost in the form of methane gas. This is caused by the activity of micro-organisms that naturally live in the animals' stomach (rumen) and assist with digestion.

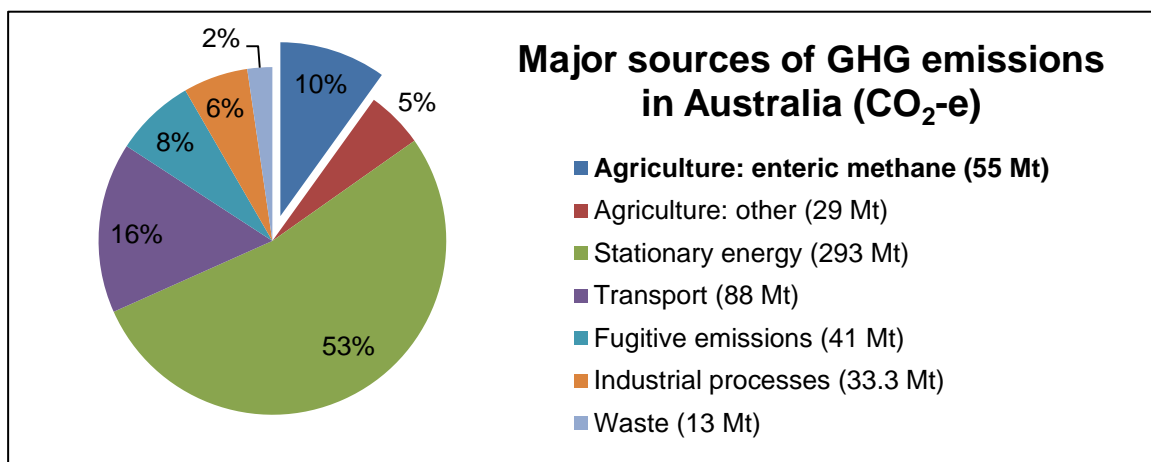
The methane gas (CH₄) is belched out by the animal and into the atmosphere. Simply put, they are 'leaking' feed energy, rather than converting it to muscle. Scientists are working to reduce this loss of feed energy by developing treatments to lower methane emissions. Preliminary research results indicate that some treatments can reduce methane-related energy loss by more than 50 per cent.

Methane is also a potent greenhouse gas and in Australia about 10 per cent of all greenhouse gas emissions and two thirds of agricultural emissions come from methane produced by cattle and sheep. Knowledge and practices aimed at reducing methane emissions from livestock therefore serve the dual purpose of improving feed efficiency, productivity and farm income, while also helping lower Australia's greenhouse gas emissions.

Agriculture, enteric methane and Australia's total GHG emissions

In Australia the agriculture sector produces approximately 84 million tonnes of CO₂ equivalent each year, or about 15 per cent of the country's total greenhouse gas (GHG) emissions.

The vast majority of emissions from agriculture are in the form of enteric (i.e. caused by digestion) methane emission from cattle and sheep. Annual enteric methane emissions are approximately 55 million tonnes of CO₂ equivalent, or 10 per cent of Australia's total emissions of 552 million tonnes.



Source: Australian National Greenhouse Accounts: National Inventor Report 2011 (Vol 1). Australian Government.