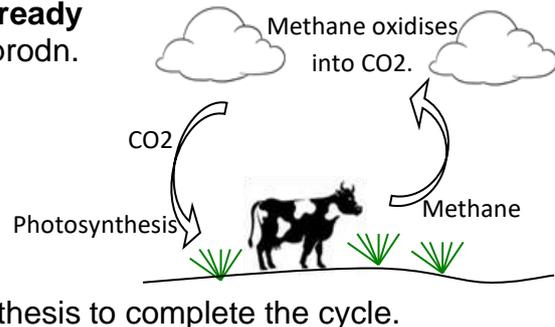


We asked some NZ scientists to comment on methane emissions relative to climate change. Here are their responses:

- ❖ Carbon dioxide (“CO₂”) is vital plant food that makes the grass grow using photosynthesis. Methane burped by ruminants transitions into CO₂ and water vapour so increasing levels of CO₂ help farmers produce and earn more.

- ❖ NZ ruminant methane emissions are **already decreasing** even with increased farm prodn.

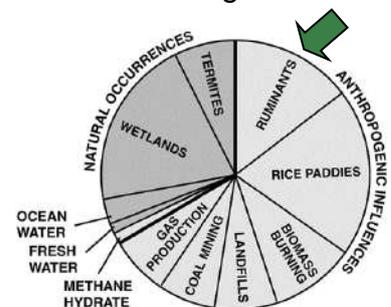
- ❖ NZ sequesters more Greenhouse Gas (“GHG”) emissions than we produce. There is a natural cycle on farms - Methane burped by cows and sheep changes into CO₂ which is taken up by grass and other vegetation in photosynthesis to complete the cycle.



- ❖ With Methane naturally breaking down to CO₂ and water vapour over some 9 to 10 years and our ruminant numbers in NZ now stable there is **no additional** methane being emitted.

- ❖ Officially NZ emits a tiny 0.17% of the world’s total man-made GHG emissions—a figure that is increasingly understood to be overstated. Reducing this minor amount cannot make a difference.

- ❖ Methane is a trace gas. It is 0.000018% of the atmosphere or 1.8 parts per million. Ruminants produce just 14% of the planet’s methane. NZ has 1% of the world’s ruminants. Infinitesimal !!!!



- ❖ Recent scientific evidence shows that Methane is **irrelevant** as a warming Greenhouse Gas. Water Vapour is the dominant GHG at around 96% of all Greenhouse Gases. All GHG’s are only 1% of the atmosphere. Water vapour is 5,000 to 8,000 times more prevalent in the atmosphere than methane. The IPCC agrees.

- ❖ There are some remarkable differences in opinions among scientists on how to measure methane relative to other greenhouse gases. Many scientists believe New Zealand’s Methane emissions are overstated by at least 400%. That is too critical to ignore. We consider this difference is so significant it requires further discussion and resolution before penalising farmers.

Go to www.farmemissions.co.nz to join **FARM**, donate and learn more.

- ❖ On the Electromagnetic Spectrum where atmospheric radiation (ultra-violet, visible light and infrared) occurs Methane absorbs and re-emits very little – almost zero. Its role is insignificant because water vapour already dominates over the entire range (over 70%) compared to Methane (less than 1%). Methane is a minnow beside water vapour.
- ❖ Recent science out of the USA shows increasing methane in the atmosphere cannot cause any further measurable impact on temperature. This science was carried out in “real air” as opposed to earlier work done in dry air in a laboratory, applying predetermined idealistic, theoretical computer models
- ❖ We have noted the NZ Climate Commission’s recommendations to use GWP100 (Global Warming Potential) as opposed to GWP *. We find their reasoning to be questionable and lacking a robust basis. We repeat the call for more work on this critically important issue before any action is taken.
- ❖ We note that NZ farmers have a very low carbon footprint already compared to agricultural practices in other countries. In a world that needs more food we would point out that reducing NZ’s farm output here will shift our food production to countries with higher carbon footprints, undermining our profits, our exports, jobs, and the economic future of our children.
- ❖ Farming is not at risk from the effects of climate change.
- ❖ Many of the official figures and facts on methane are ‘guesstimates’ with an acknowledged error rate of up to +/- 55%.
- ❖ We conclude there is no sound scientific basis for the NZ Climate Commission’s recommendations forcing farmers to reduce methane emissions or to tax them for a problem that does not exist.

Dr Jock Allison, ONZM, M.Agr Sc (Hons); Ph.D. Dr Doug Edmeades, ONZM, Ph.D; Deborah Alexander, B.AgSc; Dr Geoff Duffy, DEng, Ph.D, BSC, ASTC Dip, FRS NZ, FICHEM ;Dr John Maunder Ph.D

We encourage you to:

Join F.A.R.M. Help us fight unjust policies and taxes.

Farming leaders have let you down. They will not win by trying to appease the extreme lobby groups who ignore the science that does not fit their agenda.

www.farmemissions.co.nz

