

Breathe in, now breathe out...

 Rural News, New Zealand, General News

19 Aug 2014

Page 9 • 381 words

Photo: No • Type: News Item • Size: 165.00 cm² • NZ • New Zealand • Press • ID: 300265389

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Before the animals undergo the methane tests they get time to acclimatise to the environment.

sheep selected for tests are fed for two to three weeks prior on the diet they will have during the two-day trial.

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"We often use a lucerne pellet diet because you can produce a large amount of it and it's consistent from day to day and from experiment to experiment; whereas pasture changes a lot. You have to be careful it wasn't the change in pasture quality that's causing a slight difference in the methane emissions."

this helps ensure validity of data over a longer period, given that variations in feed quality are effectively taken care of.

after two to three weeks of the new diet, the animals are taken to the research facility, put in metabolism crates and tethered and fed for about three days acclimatise to their new environment. No welfare issues arise and they soon settle.

Once acclimatised to the laboratory environment they are moved to the next room and the methane chambers - respiratory chambers where for two days air is pumped in and everything coming out is measured every six minutes including the methane.

"We can give them a defined amount of feed and measure how much of that they can eat.... Later we measure how much methane they produce, so we know how much they ate and how much methane they produce. then we can calculate 'methane yield', basing our measurements of methane on the amount of methane per unit of feed eaten." From this they can calculate whether some feeds produce more or less methane.

Vaccination trials can determine any impact on methane production or the animals can be dosed with an inhibitor to test its impact on methane production. the researchers can also identify animals which are low methane producers.

In a nearby computer room all data is collected and stored.

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