

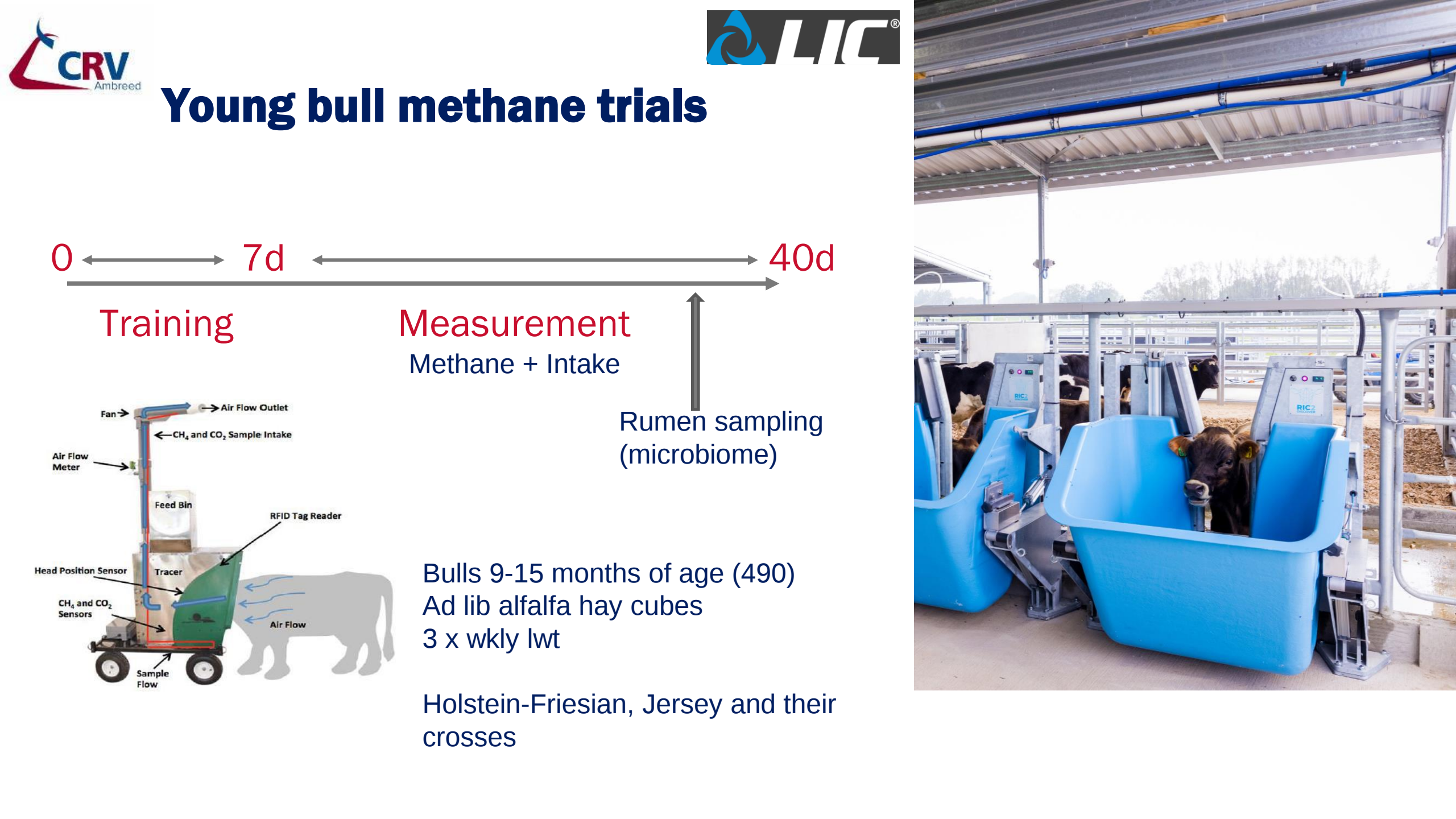
GreenFeed for phenotyping – our experiences

Lorna McNaughton, Olivia Spaans, Gemma Worth, Jessica Douie

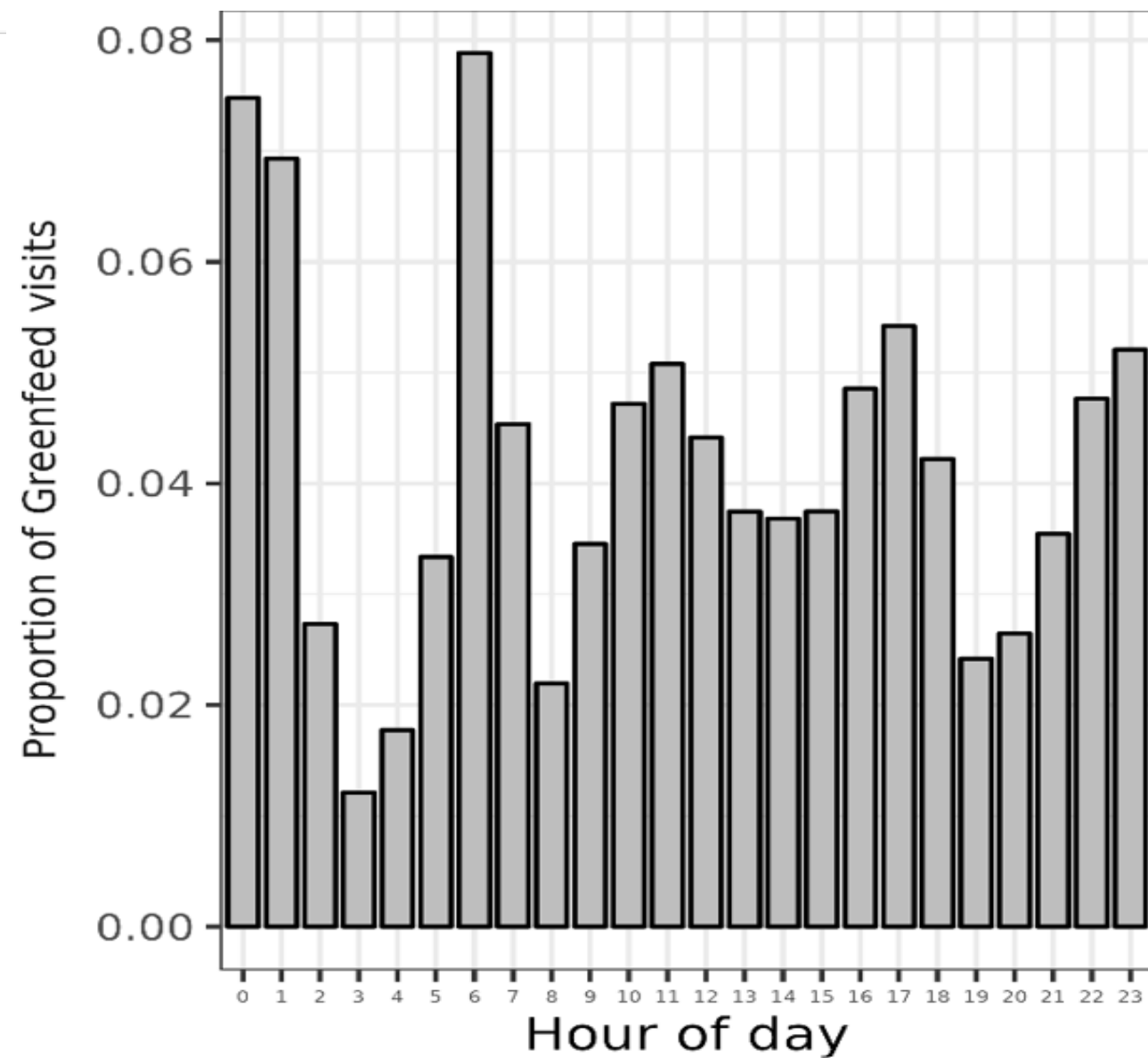
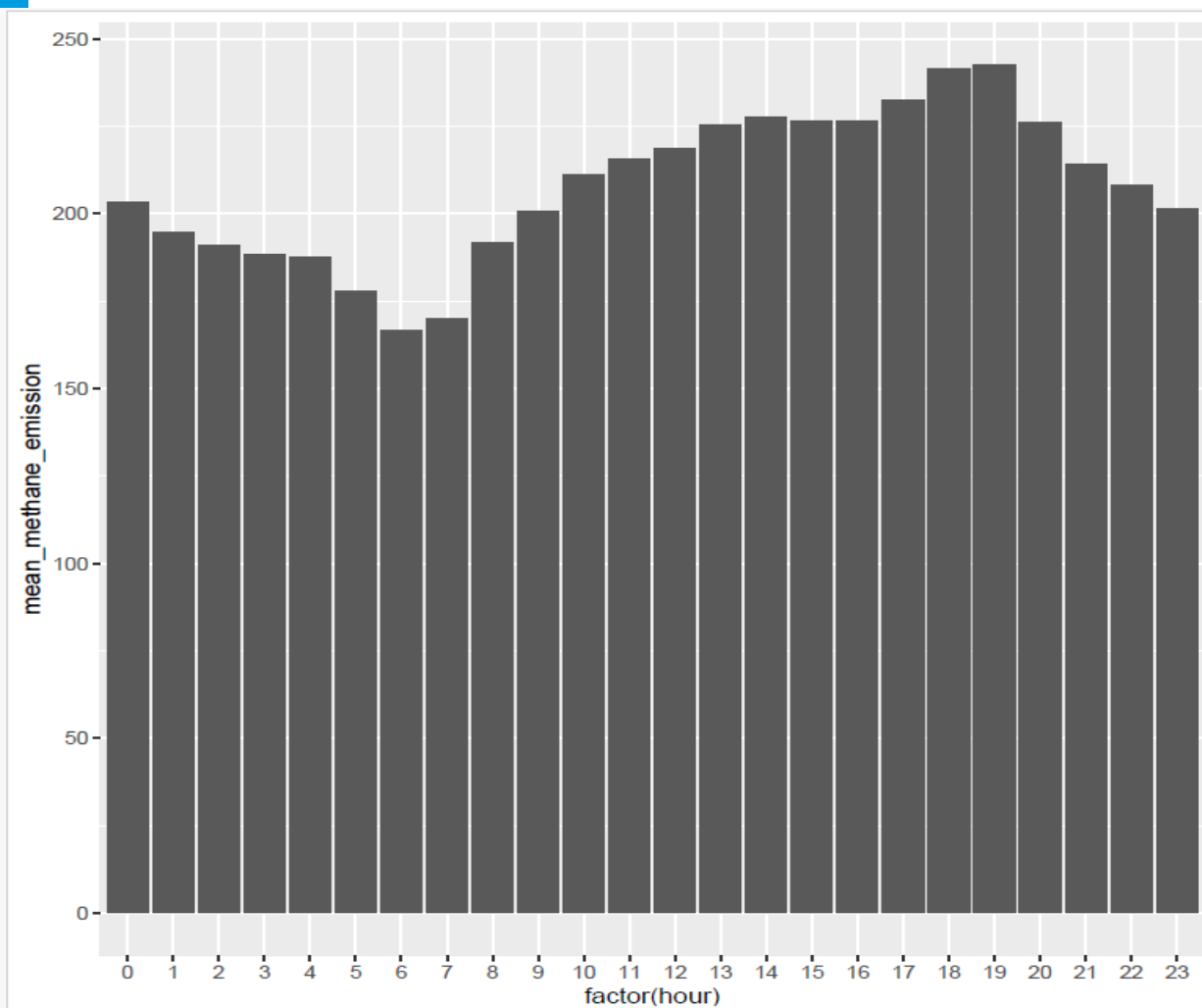
LIC

New Zealand

Funding provided through the Ag Emissions Centre science
programme (AgEC)"

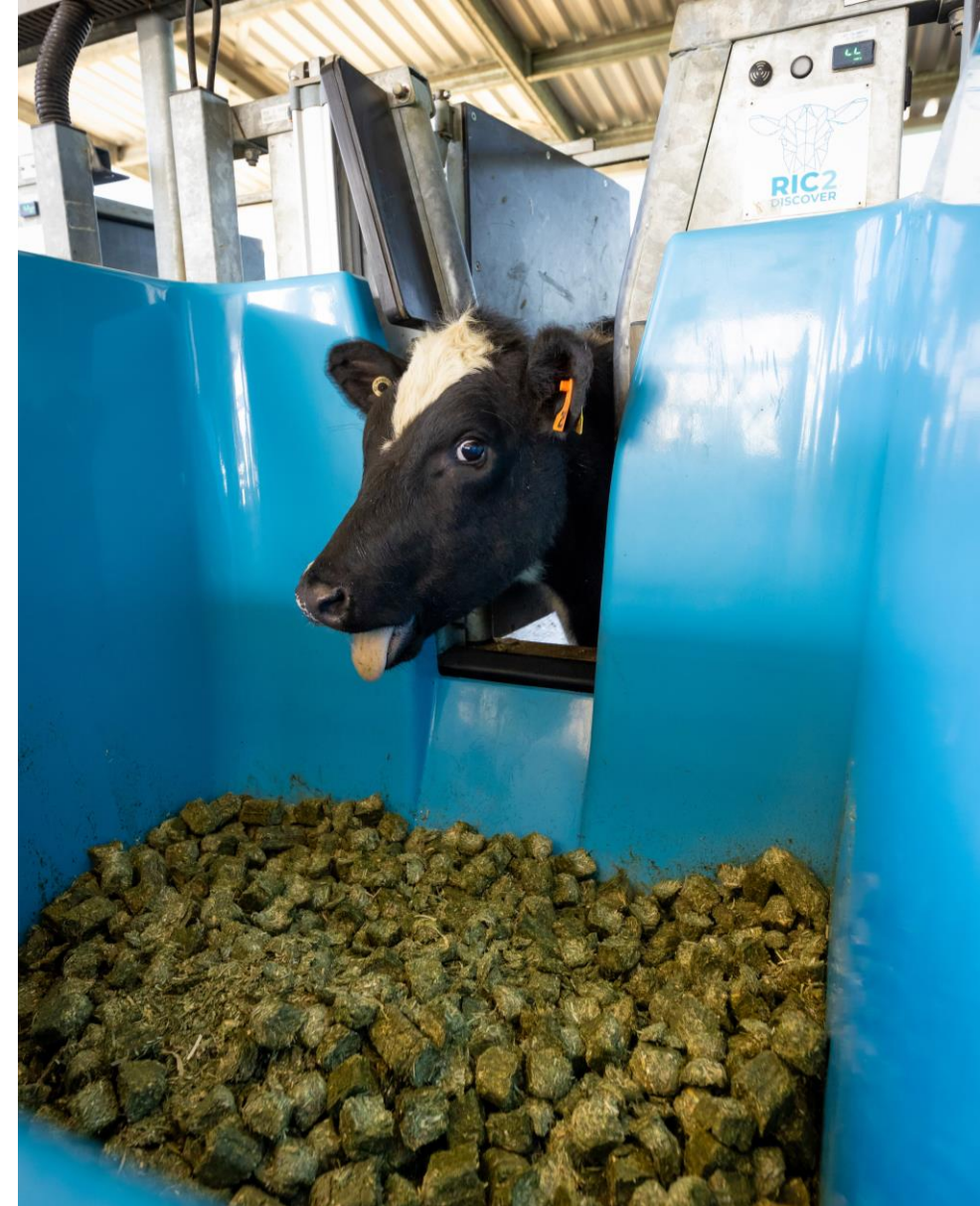


		Mean percentage of daily visits	
n	Visits/bull in 28 days	2 or fewer	5 or greater
136	111.4	11.6%	70.7%
122	124.9	8.3%	61.5%
218	123.0	10.9%	59.6%
47	108.0	23.7%	38.5%
227	126.6	11.2%	60.8%
94	124.9	7.7%	54.2%
169	119.9	8.0%	45.5%



Data processing

- Removed values where gas values were negative (C-Lock remove visits <2 minutes). Bulls were removed if there were less than 10 observations across 10 days.
- Outliers were identified using Mahalanobis distances calculated for methane, carbon dioxide and hydrogen emissions for individual bulls with a p-value set to 0.01,
- Current trial design is 1 GF/pen, difficult to compare between GF
- Heifer study approx. 120 animals/10 GF



Heritabilities & Repeatabilities: weekly average methane

	Adj_CH ₄	CH ₄	CO ₂
h ₂	0.24 ± 0.07	0.23 ± 0.07	0.14 ± 0.06
Repeatability	0.48 ± 0.02	0.47 ± 0.02	0.49 ± 0.02

Adj_methane – adjustment for the hour of the day of the measurement (modified version of Fresco et al. 2023)



Our views

We like the ease of data collection

They are a piece of technical equipment and need to be looked after

It's probably easier having 8 than 1 – need someone who likes machines/electronics

They are expensive – but for us collecting intake is the most expensive piece

They are likely to remain a part of our programme – but we are looking at how to collect more data.

Science is a
team game



Funding provided through the Ag Emissions
Centre science programme (AgEC)"

What impact does visitation pat

