



# Enteric Fermentation Flagship Project: Rumen microbiomes to predict methane

**Animal Selection Genetics & Genomics Network** 

**Suzanne Rowe** 





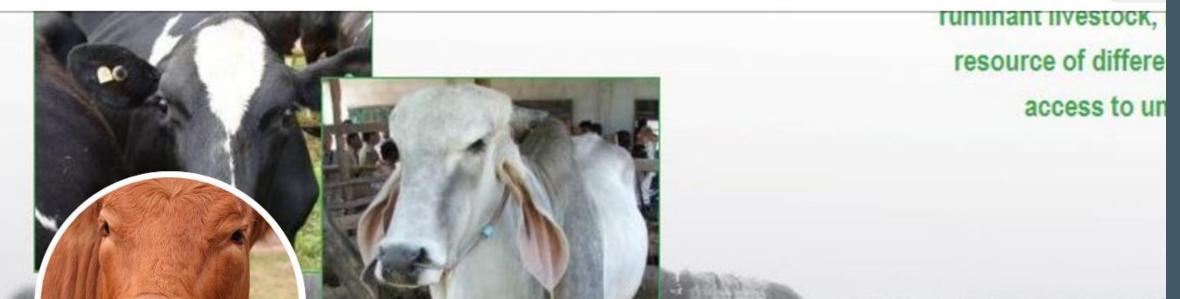








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#### GLOBAL RESEARCH ALLIANCE on agricultural greenhouse gases

## ANIMAL SELECTION, GENETICS & GENOMICS NETWORK

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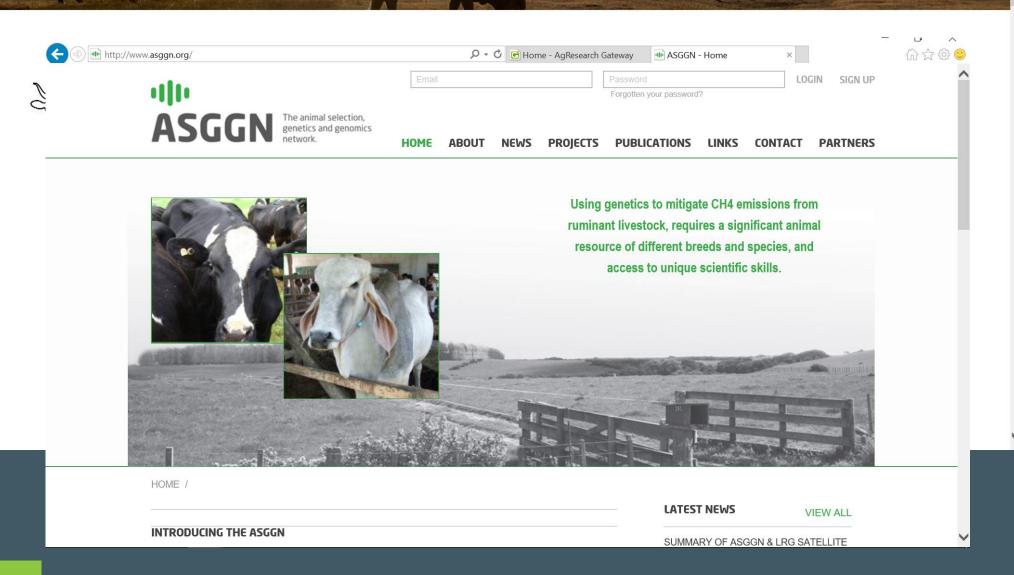
Animal Health & Greenhouse Gas Emissions Intensity Network

Animal Selection, Genetics & Genomics Network

Feed & Nutrition Network

Manure Management Network

Rumen Microbial
Genomics Network





# Genetics to mitigate methane

- Bringing together scientists
- Identification of new collaborations and connections
- Defining traits and breeding objectives
- Establishing the heritability of methane emissions and its genetic associations with other performance traits
- Sharing data, methods & protocols for prediction











## **Achievements**

- Consensus methods for breeding low methane emitting animals
  - N. K. Pickering, Y. de Haas, J. Basarab, K. Cammack, B. Hayes, R. S. Hegarty, J. Lassen, J. C. McEwan, S. Miller, C. S. Pinares-Patiño, G. Shackell, P. Vercoe and V. H. Oddy
- International committee for animal recording trait definitions and working group
  - Methane production grams/day
  - Methane yield per kg dry matter intake
  - Methane intensity per unit product (e.g., milk, meat, human edible protein)
  - Proxies CO<sub>2</sub>, Volatile fatty acids, MIRS
  - Meta data







## Activities 2018/19

• WCGALP meeting 2018

- Funding alliances
  - NZ, Uruguay, Ireland, Scotland, Tunisia, Norway, Argentina
  - Gas 2 Grass Era-Net funding
- Social Media/Communication platform
- Disseminate flagship protocols and announcements

**EAAP 2019** 

70<sup>th</sup> Annual Meeting of the European Federation of Animal Science City of Ghent (Belgium), 26 - 30 Aug 2019



Welcome to the 70<sup>th</sup> EAAP Annual Meeting in Ghent

The Belgian organizing team is delighted to invite you to the 70<sup>th</sup> Annual Meeting of EAAP. The meeting takes place rom August 26<sup>th</sup> to August 30<sup>th</sup> 2019 in the historic yet contemporary city of Ghent, Belgium. The main organizer is he Flanders Research Institute of Agriculture, Fisheries and Food (ILVO) under the patronage of the Department of Igriculture and Fisheries from the Flemish Government.

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World Congress
on Genetics Applied to
Livestock Production

Aotea Centre Auckland, New Zealand, 11–16 February 2018



# **Planned Activities**

 ASGGN meeting - Breeding for sustainable, efficient, environmentally friendly livestock: paths to animal production of the future, Sunday 25<sup>th</sup> of August, 2019, 12.30 – 17.30, Banquet room at ICC, Ghent, Belgium

 A permanent workshop at a major conference or appropriate joint network – Plant and Animal Genome Conference

Funding for attendance for developing countries





# Workshops



WCGALP Vancouver 2014 - Methane measures and feed efficiency

GGAA – Melbourne 2016 – Proxies and adaptation

• WCGALP 2018 – Feed Efficiency, Methane, Microbiomes

• EAAP – Ghent 2019



