GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

GRA FLAGSHIP PROJECT TITLE: Satellite monitoring of quantity and quality of available biomass in pastoral livestock systems

Leader: Hayden Montgomery, Special Representative

Council Champions:

1. Canada
2. Uruguay
3. Costa Rica
4. Fontagro
5. New Zealand
6. Argentina
7. Ireland

Overview of project

GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

- **Start date and project length:**

- March 2022
- 48 months

- **Brief description of project:**

- *Key words: remote sensing, grasslands, rangelands, forage quality and quantity, methane, nitrogen, animal excreta, soil carbon*
- The objective of the project is to use space-borne remote sensing information coupled with modelling approaches and field sampling to identify and classify types of grasslands/rangelands, their characteristics, including estimates of the quantity and quality of biomass available, in real-time and with adequate precision to improve monitoring of greenhouse gas emissions and removals in pastoral livestock systems and to provide tools for improved decision making for grazing management for climate mitigation and adaptation.

Key Participants and Resources

GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

Current participants and resources:

1. FONTAGRO, MPI – NZ, INTA Argentina, FAUBA - Argentina, INIA - Uruguay, Agrosavia – Colombia, INTA – Costa Rica, MAGYP - Argentina, MGAP – Uruguay, AACREA – Argentina, Global Roundtable on Sustainable Beef, Proleche - Costa Rica, Manaaki Whenua Landcare Research - New Zealand, Teagasc – Ireland, University of Glasgow - UK, CSIRO - Australia, AAFC-Canada, HBLFA - Austria, University of Life Sciences Vienna – Austria, INRAE – France, James Hutton Institute – UK, SRUC – UK, UNIMI – Italy, KIT – Germany, UNIFI – Italy, CESBIO – France, CIRAD – France, CSE – Senegal, University of Free State – South Africa, Makarere University – Uganda,
2. Resources – USD1.3M has already been already secured. In-kind contributions will supplement this and further resources will be sought to support expanded participation.

Opportunities for involvement

1. Contributing historical and future field data/samples from diverse grassland/rangeland ecosystems, with associated site information
2. Contributing other remote/proximal sensing information/capability to complement space-borne information.
3. Contributing with new image processing techniques and development of predictive models.