Validation of RUMINANT model of enteric methane emissions

Project Title: P267 - [Flagship Leader] FP3: Engagement, synthesis and support

Description of the innovation: RUMINANT is a model that simulates the digestive and metabolic processes of ruminant livestock. Based on the characteristics of the animal and the quality of the feed available (which must be entered by the model user), RUMINANT models nutritional needs and fermentation kinetics and estimates potential consumption, production of milk and meat, manure, excretion of nitrogen, and methane emissions.

New Innovation: No

Stage of innovation: Stage 3: available/ ready for uptake (AV)

Innovation type: Research and Communication Methodologies and Tools

Geographic Scope: National

Number of individual improved lines/varieties: <Not Applicable>

Country(ies):

- Colombia

Description of Stage reached: The RUMINANT model was validated for enteric methane emissions from cattle in the tropical lowlands (Cauca Valley) of Colombia. Based on findings from the validation process, RUMINANT is available as a tool for providing rigorous information on animal productivity and mitigation potential at relatively low cost in Colombia.

Name of lead organization/entity to take innovation to this stage: CIAT (Alliance) - Alliance of Bioversity and CIAT - Regional Hub (Centro Internacional de Agricultura Tropical)

Names of top five contributing organizations/entities to this stage:

- IDEAM - Instituto de Hidrología, Meteorología y Estudios Ambientales (Colombia)

Milestones: No milestones associated

Sub-IDOs:

Contributing Centers/PPA partners:

Evidence link:

- https://hdl.handle.net/10568/97097

Deliverables associated:

- D11521 - Model of enteric methane emissions supports climate change mitigation in Colombia's cattle sector (https://cgspace.cgiar.org/handle/10568/97097)

Contributing CRPs/Platforms:

- CCAFS - Climate Change, Agriculture and Food Security
- Livestock - Livestock