

Fertilization strategies that reduce emissions of nitrous oxide in forage grasses on farm in the low tropics

Project Title: P1599 - Catalyzing farmer innovations and the adoption of promising management and technological options to facilitate the development of low-carbon cattle value chains in Latin America

Description of the innovation: The agronomic and productive performance, nutritional quality and nitrogen use efficiency of the most common pasture grasses of the low tropics was evaluated in response to different N sources. The N flow between soil, plant and environment was evaluated for the treatments with the highest NUE. Subsequently, the N flux between soil, plant and environment was evaluated for the treatments with the highest NUE at different fertilization rates.

New Innovation: Yes

Stage of innovation: Stage 2: successful piloting (PIL - end of piloting phase)

Innovation type: Production systems and Management practices

Geographic Scope: Sub-national

Country(ies):

- Colombia

Description of Stage reached: Fertilizer sources and doses were identified to achieve higher forage productivity and N uptake, increasing these parameters up to 43%; for the conditions of the farm. The best-performing fertilizer-dose treatment allowed NUE of 93% and reductions of nitrous oxide emissions up to 40 % compared to other management practices.

Name of lead organization/entity to take innovation to this stage: <Not Defined>

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

- YARA

Milestones:

- Analysis of farmers' incentives and barriers to adoption to increase input efficiency and reduce FLW while also reducing emissions

Sub-IDs:

- 8 - More efficient use of inputs

Contributing Centers/PPA partners:

- CIAT (Alliance) - Alliance of Bioversity and CIAT - Regional Hub (Centro Internacional de Agricultura Tropical)

Evidence link: <https://hdl.handle.net/10568/111255>

Deliverables associated: <Not Defined>

Contributing CRPs/Platforms:

- Livestock - Livestock