

Competitive livestock systems in the context of climate change

Strategies to improve feed digestibility and decrease enteric fermentation resulted in lower greenhouse gas (GHG) emissions in Central America



Costa Rica /Honduras /Nicaragua /Panama /Panamá



400
Farms for CO2 base line quantification



75
Professionals trained



7
Undergraduate and graduate level theses



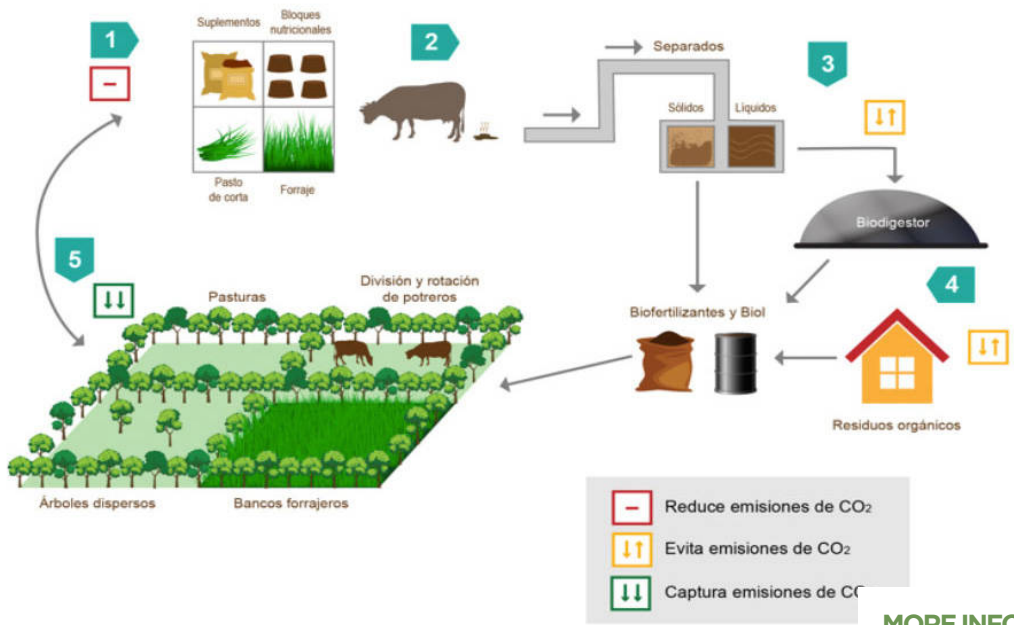
GHG sources Initiative

The first phase of the project consisted of the analysis of GHG emissions and livestock farms’ profitability. Then, nitrous oxide (N₂O) and methane (CH₄) emissions were experimentally quantified. To estimate GHG, all emissions generated inside and outside of the farms were taken into consideration. For consistency, all GHG emissions were expressed as CO₂e.

Farm management as a tool to reduce GHG Tech solution

Farms with lower intensification only have grazing systems and generate more CH₄ emissions than greater intensification farms. In contrast, farms with greater intensification systems have feeding strategies such as supplementing lactating cows with commercial concentrates, minerals, and silage. Furthermore, they tend to implement more management strategies such as pasture management plans, soil analysis, technical fertilization recommendations, rest periods, proper animal load and type of grasses and legumes usage. All these strategies result in greater milk production per cow and lower CH₄ emissions per liter of milk produced.

Better management practices and silvopastoral systems



MORE INFO



Impacts and Results

Enteric fermentation is the main source of livestock emission. Farms less intensified only have grazed animals and generate 103% more methane emissions than more intensified farms that supplement with forage banks and concentrates. Furthermore, more intensified farms produce an average of 2.1 more liters of milk per cow.

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Organizations

