



Contribution of Milk Production to Total Greenhouse Gas Emissions in Bangladesh

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Greener
Dairy
Stronger
Bangladesh



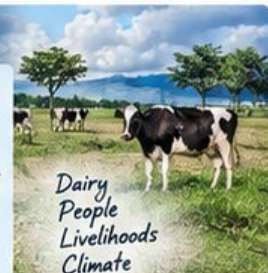
OBJECTIVE

To quantify the contribution of milk production to total greenhouse gas (GHG) emissions in Bangladesh.



DATA & METHODOLOGY

- Applied the Typical Farm Approach (TFA) of the International Farm Comparison Network (IFCN), calibrated through IDRN methodology and data.
- Data from 1,930 dairy farms analyzed for dairy herd structure, feeds and feeding management, milk yield, factors of production (land, labor, capital) and allocation of farm resources between dairy and beef.
- A panel study was performed to construct and validate the typical farms.



TYPICAL FARM APPROACH

Two typical farms were selected to represent the diversity of dairy production systems in Bangladesh.

BD-2

(2-cow farm)



Household farm
(small farm)

BD-14

(14-cow farm)



Family farm
(large farm)



METHODOLOGICAL FRAMEWORK

1,930
dairy farms

Regional
profiling

Panel
study

BD-2 &
BD-14
typical farms

Partial
LCA
(farmgate)

IPCC
Tier 1 & 2

National
GHG
estimates

- A system boundary considering both off-farm and on-farm activities where milk is considered until the farmgate delivery (Partial Life Cycle Assessment).
- Estimation of GHG emissions via both Tier 1 and Tier 2 approaches according to the Intergovernmental Panel for Climate Change (IPCC).
- GHG emissions are corrected for beef production, as dairy farms in Bangladesh consist of dairy but also some beef cattle.



KEY RESULTS

44.57

million ton CO₂e/year
using IDRN milk production data

62.58

million tons CO₂e/year
using DLS milk production data

58.7

million ton CO₂e
based on the total number of
dairy farms



INTERPRETATION

- Variations in total GHG emissions were mainly attributed to the differences in milk production.
- The IFCN approach is a good tool for farm simulation for GHG emission at national level but needs a reliable database.



POLICY IMPLICATIONS

- The results can contribute to policy decisions to identify measures for reducing greenhouse gas emissions at the farm level.



TAKE-HOME MESSAGE

Reliable data, integrated farm analysis and evidence-based policies can support a lower-emission and more sustainable dairy sector in Bangladesh.



KEYWORDS

Typical Farms, CO₂e, IDRN, GHG, milk production, gas types



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