

Increase the efficiency of dairy cattle an effective tool to reduce enteric CH₄ emissions by Brazil

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Introduction

- Climatic changes and greenhouse (GHG) emissions;
- Livestock main gases: CH₄ enteric and N₂O excreted and fertilizers;
- Brazil has a big amount of GHG emissions. Agricultural sector 13133 Gg of CH₄ in 2010 and 20.61% from dairy cattle;
- 32.09 millions of cows and 1382 L per lactation period. 170 L per habitant .
- Pressure per new area X saving land.

Reducing CH₄ enteric emissions

- Nutritional strategies;
- Management;
- Genetic;
- Improving efficiency;

Typically production system in Brazil

	average	Best averages
% farms	91.5%	8.5%
% milk production	46.7%	53.1%
extension	poor	Industry
genetic	More Nelore	Specialized. Ex. Holsteins
Alimentation	pasture	Pasture + silage + supplements
reproduction	Bull present	Artificial insemination
Kg milk per lactation	1100-1800	More 9000

Objetive

The aim of this study was to calculate how much you can reduce greenhouse gas emissions by dairy cattle in Brazil by increasing efficiency

Material and Methods

- How many cows do we have in 2010? 32.09 million.
- How many cows do we need with the best milk productions performance? 4.99 million.
- Factor emissions of CH₄ enteric according IPCC (2006).
- How many land do we need for dairy production in 2010 in Brazil? More than 30 million of ha.
- How many land do we need considering the best current productivity of milk per cow? Less than 5 million of ha.

Results

- According Brazilian inventory 2010 – 2707.1;
- Calculated by maximum productivity – 455.4 Gg of enteric CH₄ per year;
- Less 2251.7 Gg of CH₄ launched to the atmosphere each year;
- Until 25 million ha of land saved. Could be destined crops or reforestation;
- All crops in Brazil occupy 60 millions ha (IBGE, 2013).

Discussions

- Improving efficiency of dairy cattle in Brazil could be an effective way to reduce GHG emissions;
- This work need to include N₂O emissions and CO₂ fossils;
- Create scenarios with typically production system and demand for more milk.

Conclusion

- Preliminary data indicate that investing in dairy cattle efficiency in Brazil is an effective means of reducing GHG emissions and saving land.

Thanks

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