



# **Activities of The Network on Feed and Nutrition in Relation to Greenhouse Gas Emissions (FNN)**

- **Main activities of FNN are related to:**
  - Procuring funding:
    - International projects: GN & CEDERS, Enteric Flagship & SEA FEED/METHANE projects
    - Various National projects (e.g., USDA-NIFA networking project)
  - Methodologies for studying environmental emission in ruminant systems
  - Developing databases for enteric methane emission prediction and mitigation strategies
    - Individual animal database – dairy, beef, small ruminants
    - Treatment means database
    - Microbial databases

## Promising Nutritional Strategies to Reduce Enteric Methane Emission from Ruminants – a Meta-Analysis<sup>1</sup>

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# Capturing Effects of Diet on Emissions from Ruminant Systems

ERAGAS project

October 2017 till November 2020

9 eligible partners; various supporting partners

Total 3-year budget € 3.527.000, -



Building on & strong alliance with the FACCE-JPI Global Network project & the GRA through the FNN (A. Hristov)

**FACCE**  
**ERA-GAS**



MONITORING & MITIGATION OF GREENHOUSE GASES  
FROM AGRI- AND SILVI-CULTURE



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## Animal Feed Science and Technology

journal homepage: [www.elsevier.com/locate/anifeedsci](http://www.elsevier.com/locate/anifeedsci)



Review article

### Design, implementation and interpretation of *in vitro* batch culture experiments to assess enteric methane mitigation in ruminants—a review

Yáñez-Ruiz D.R.<sup>a,\*</sup>, Bannink A.<sup>b</sup>, Dijkstra J.<sup>c</sup>, Kebreab E.<sup>d</sup>, Morgavi D.P.<sup>e</sup>, O’Kiely P.<sup>f</sup>, Reynolds C.K.<sup>g</sup>, Schwarm A.<sup>h</sup>, Shingfield K.J.<sup>i,j</sup>, Yu Z.<sup>k</sup>, Hristov A.N.<sup>l</sup>

Animal Feed Science and Technology 219 (2016) 13–30



Contents lists available at ScienceDirect

## Animal Feed Science and Technology

journal homepage: [www.elsevier.com/locate/anifeedsci](http://www.elsevier.com/locate/anifeedsci)



Review article

### Review of current *in vivo* measurement techniques for quantifying enteric methane emission from ruminants

K.J. Hammond<sup>a</sup>, L.A. Crompton<sup>a</sup>, A. Bannink<sup>b</sup>, J. Dijkstra<sup>c</sup>, D.R. Yáñez-Ruiz<sup>d</sup>, P. O’Kiely<sup>e</sup>, E. Kebreab<sup>f</sup>, M.A. Eugène<sup>g</sup>, Z. Yu<sup>h</sup>, K.J. Shingfield<sup>i,j</sup>, A. Schwarm<sup>k</sup>, A.N. Hristov<sup>l</sup>, C.K. Reynolds<sup>a,\*</sup>







J. Dairy Sci. 101:6655–6674

<https://doi.org/10.3168/jds.2017-13536>

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## ***Symposium review: Uncertainties in enteric methane inventories, measurement techniques, and prediction models<sup>1</sup>***

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**J. Dairy Sci. 102:5811–5852**

**<https://doi.org/10.3168/jds.2018-15829>**

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## ***Invited review: Nitrogen in ruminant nutrition: A review of measurement techniques***

**A. N. Hristov,<sup>1\*</sup> A. Bannink,<sup>2</sup> L. A. Crompton,<sup>3</sup> P. Huhtanen,<sup>4</sup> M. Kreuzer,<sup>5</sup> M. McGee,<sup>6</sup> P. Nozière,<sup>7</sup>  
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## PRIMARY RESEARCH ARTICLE

WILEY Global Change Biology

## Prediction of enteric methane production, yield, and intensity in dairy cattle using an intercontinental database

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## Prediction of enteric methane production, yield and intensity of beef cattle using an intercontinental database

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Contents lists available at ScienceDirect

# Animal Feed Science and Technology

journal homepage: [www.elsevier.com](http://www.elsevier.com)

## Evaluation of the performance of existing mathematical models predicting enteric methane emissions from ruminants: Animal categories and dietary mitigation strategies

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