

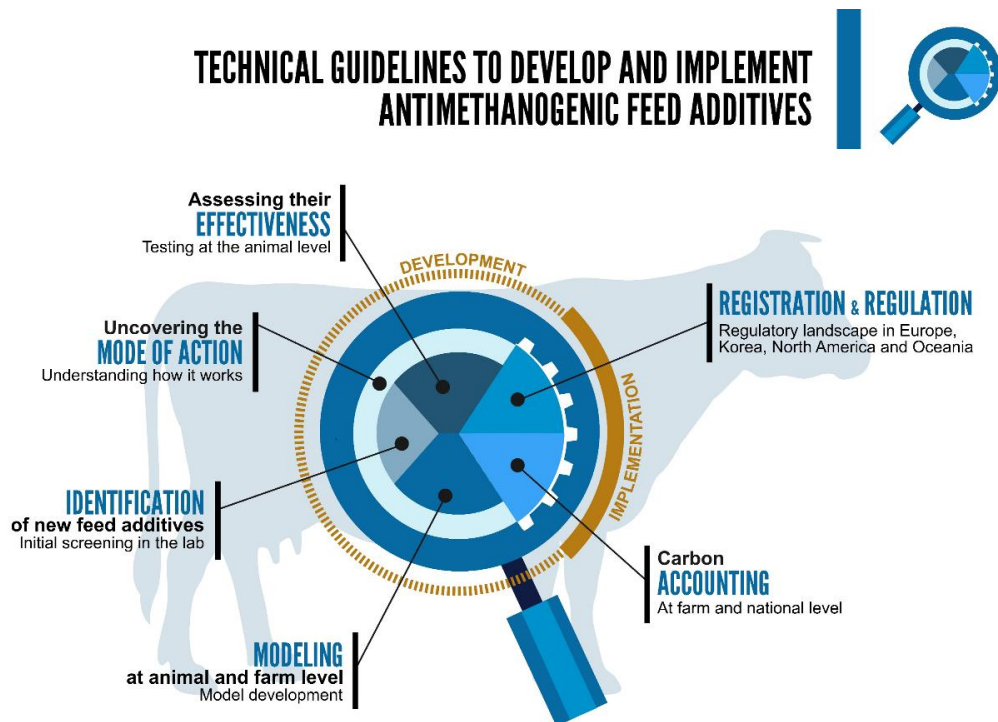
NEWS RELEASE

Guidelines Released for Research and Implementation of Feed Additives to Reduce Ruminant Methane Emissions

Global Research Alliance Feed Additives Flagship Project Unveils Comprehensive Technical Guidelines in a Special Issue of the Journal of Dairy Science

January 27, 2025 – The [Feed Additives Flagship Project](#), led by the Feed and Nutrition Network of the [Global Research Alliance on Agricultural Greenhouse Gases](#) (GRA) and funded by the Global Dairy Platform, has released a groundbreaking open-access [collection of technical guidelines](#) in the *Journal of Dairy Science*. Harnessing the expertise of more than 60 researchers from 46 institutions across 23 countries, the detailed guidelines—covering the full spectrum of additive development and implementation—aim to help scientists and industry leaders accelerate methane-reducing feed additives to significantly reduce greenhouse gas emissions from ruminants.

TECHNICAL GUIDELINES TO DEVELOP AND IMPLEMENT ANTIMETHANOGENIC FEED ADDITIVES



In a special issue of the *Journal of Dairy Science*, a global team of researchers share articles detailing the latest technical recommendations to help fill knowledge gaps and build trust around feed additives.

(Credit: Florencia Garcia and Yelena Grigorenko)

Addressing a Critical Challenge

Climate change is one of the biggest challenges of our time, and methane is the second most impactful greenhouse gas, after carbon dioxide, contributing to the emissions engine driving these changes. Although methane has a short lifespan in the atmosphere, its potent warming effect—more than 80 times that of CO₂ in the first 20 years after release—means that reducing methane is a crucial aspect of climate action. One source of methane emissions is farmed ruminants, such as cows and sheep, which produce enteric methane during digestion and methane from manure. To address this, feed additives have emerged as a *leading solution* that shows great promise in reducing enteric methane emissions from these animals.

Translating Nutrition Innovation into Technical Guidelines

The Feed Additives Flagship Project's primary goal is to provide the scientific community and the livestock sector with actionable technical guidelines on how to *identify, test, and implement* effective feed additives. These guidelines—including [a helpful introduction to the overall project](#)—provide comprehensive recommendations for the development and implementation of methane-reducing feed additives, each focusing on a different aspect of additive development:

1. **[Identification of promising candidates](#)**: Guidelines for discovering and testing compounds that reduce methane production from rumen microbes (Zoey Durmic et al.)
2. **[Testing at the animal level](#)**: Best practices for evaluating the efficacy and safety of additives in live animals under practical conditions (Alexander Hristov et al.)
3. **[Model development](#)**: Recommendations for modeling the impact of feed additives across various production systems (Jan Dijkstra et al.)
4. **[Understanding how additives work](#)**: Insights into the biochemical mechanisms of feed additives to improve their development and acceptance (Alejandro Belanche et al.)
5. **[Authorization and regulation](#)**: Overview of regulatory requirements across different jurisdictions to ensure the safe and effective use of feed additives (Juan Tricarico et al.)
6. **[Carbon accounting](#)**: Methods for quantifying methane reduction achieved through the use of feed additives (Agustin del Prado et al.)

Paving the Way for Significant Global Impact

All six articles are published in the January 2025 “Feed Additives for Methane Mitigation” special issue of the *Journal of Dairy Science*, a leading general dairy research journal from the American Dairy Science Association. Each article is open access and available for free, ensuring they reach the scientific community and livestock sector worldwide. Taken together, the guidelines represent the best information from a global team of experts and offer a roadmap with the potential to significantly contribute to global livestock climate efforts.

Notes for editors

Learn more about the [Feed Additives Flagship Project](#) and access all six of the technical guidelines in the [Journal of Dairy Science](#).

Journalists requiring information or wishing to interview the authors should contact the project leaders for further information:

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