

## **Comments received on Methodology for the Reduction of Enteric Methane Emissions from Ruminants through the Use of 100% Natural Feed Supplement**

This comment was received via email by the VCS.

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Organization: Greenhouse Gas Management Institute

Country: United States

- 1) “a. The active ingredients of the feed supplement must be 100% natural plant-based and non-GMO.”  
In recent years, studies have shown that particular species of seaweed (macroalgae) have the ability to reduce emissions from enteric fermentation. To clarify that such macroalgae can be used under this methodology, we recommend the text changing the text to state “100% natural plant-based (terrestrial or aquatic) and non-GMO” or “100% natural plant-based (including macroalgae) and non-GMO.”
- 2) “c. The feed supplement must be used as pre product specification provided by the manufacturer. The Specifications provide critical defining conditions to secure the default level of reduction of the enteric methane emissions, such as the feeding routine and dose of supplement per kg of DMI to the animal.”  
This should read “must be used as per” product specification.
- 3) “ERFEnteric Option 1: Apply the default enteric emission reduction factor estimated by the manufacturer of the feed supplement and calculate the emissions using equation 5.5 This option may only be used where the enteric emission reduction factor provided by the manufacturer of the feed supplement is supported by peer reviewed literature or farm-specific emissions data. This information must be provided for review at validation and verification. Additionally, there must be no significant differences in project parameters (e.g., feed regime, geographic region, and management practices) from the manufacturer’s supporting documents.”

We believe that the standard used for **ERFEnteric Option 1** is relatively weak and should be specified to ensure environmental integrity in the project activities.

Although there are examples provided, there are no criteria described for what constitutes “significant differences” between project parameters and the manufacturer’s supporting documents. This cedes the determination of significance to the project developer and verifier, which creates a risk of ignoring substantial differences. Given the huge variation in enteric fermentation emission factors for ruminants based on breed, feed, climate, management, and other factors, it is necessary to set out the suite of criteria, the indicators to compare the manufacturer’s specifications with the project circumstances, and the acceptable range of variation (including adjustments if required).

While the text quoted above requires that “Specifications provide critical defining conditions to secure the default level of reduction of the enteric methane emissions, such as feeding routine and dose of supplement per kg of DMI to the animal,” it does not specifically name other aspects of husbandry and management that will determine the baseline ruminant emissions, potentially the efficacy of emissions reductions, and ultimately the reduction in emissions as a result of the project activity.

In addition, the language in the following phrase is in the right direction, but insufficient: “the enteric emission reduction factor provided by the manufacturer of the feed supplement is supported by peer

reviewed literature or farm-specific emissions data.” Here, “supported” is ambiguous and overly flexible. The criteria suggested above will help set a higher standard of proof. We suggest replacing “supported” with “established.” In particular, this text can be made much stronger by requiring compliance with relevant ISO/ANSI standards.

- 4) “There would be some small additional upstream emissions in feed supplement manufacture and transport, which are considered negligible in this methodology.”

These feed supplements are rare on the market now and used in relatively small quantities. This is, after all, the justification for using the activity penetration option of the positive list to justify additionality for the project methodology. Because of the few products available, there may be significant transportation miles between the point of feed supplement production and its site of use. The feed supplement per head may also be a significant part of the animal’s intake and therefore significant mass. As such, there may be significant associated transportation emissions from the feed supplement compared against baseline feed, which can be sourced more locally. As such, we recommend that the transportation emissions associated with the feed supplement be estimated, or that project developers credibly demonstrate that the transportation emissions are likely to be insignificant using a simplified estimation method.