

ICAR webinar on “Methane emissions and feed efficiency: where are we now and where do we want to be?”



Third webinar of the The Brian Wickham Young Person's EX2 Series

25 March h. 20.30 Paris time

Free participation upon registration at:

https://us02web.zoom.us/webinar/register/WN_4KXFb1qbR1iPpAl1-UKz5A

Methane emissions: A climate culprit

The third webinar of the BWYPEX EX² Series, presented by Caeli Richardson (AbacusBio) focuses on “Methane emissions and feed efficiency”.

Methane (CH₄) is a potent greenhouse gas that significantly contributes to global warming. Here are some key points about methane emissions:

1. **Sources of Emissions:**
 - a. **Natural Sources:** These account for around **40%** of total emissions. Wetlands, biomass burning, and geological seepage are examples.
 - b. **Anthropogenic Sources:** Human activities contribute approximately **60% of total** methane emissions. The largest anthropogenic source is agriculture.
 - c. **Agriculture’s Role:** Livestock, particularly ruminants are significant methane emitters due to **enteric fermentation** (the digestive process in their stomachs).
2. **Improving Data Accuracy:** Accurate measurement and reporting of methane emissions remain challenging.

Feed Efficiency: A Dual Solution

Let’s explore feed efficiency:

1. **Definition:** Feed efficiency refers to how effectively animals convert their feed into useful products (e.g., milk, meat) while minimizing waste.
2. **Reducing Methane Emissions:** Improving feed efficiency can directly impact methane emissions. Here’s how:
 - o **Selective Breeding:** Identifying and breeding animals with better feed efficiency traits can reduce methane production.
 - o **Nutritional Strategies:** Optimizing diets to enhance nutrient utilization can minimize methane emissions.
 - o **Feed Additives:** Some additives (e.g., tannins, fats) can reduce methane production in the rumen.

Where We Are Now:

- o **Researchers** are studying genetic markers associated with feed efficiency.
- o **Nutritional interventions** are being explored to mitigate methane emissions.
- o **Industry initiatives** aim to promote sustainable practices.

Where We Want to Be:

- o **Precision Livestock Farming:** Implementing technology to monitor individual animals’ feed efficiency and health.
- o **Integrated Approaches:** Combining genetics, nutrition, and management strategies to achieve optimal feed efficiency.
- o **Global Collaboration:** Strengthening research, policy, and industry efforts to reduce methane emissions while ensuring food security.



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