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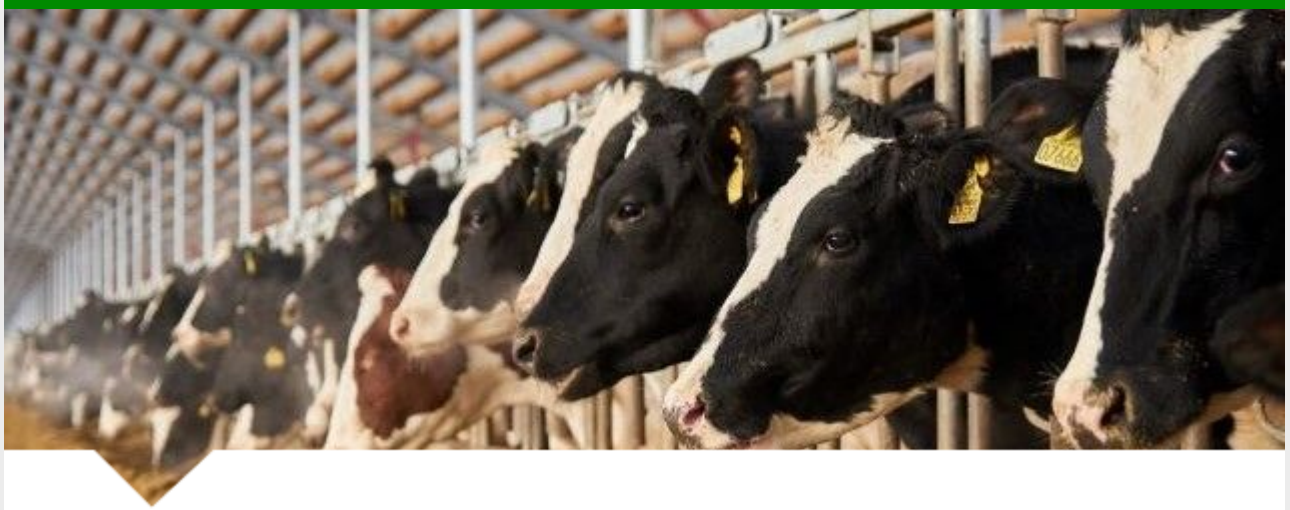
Global Methane Genetics initiative - Newsletter April 2025



Dear reader,

This is the first issue of the Global Methane Genetics (GMG) initiative newsletter. GMG is a worldwide initiative funded by the Bezos Earth Fund and the Global Methane Hub, with the support of many other partners. This newsletter is to inform you about our activities, which are generally open to join. We hope that you enjoy reading! If you have any questions regarding our activities, please do not hesitate to contact us at gmg@wur.nl.

In the first year

In the first year, the structure of the GMG initiative was established, and several Working Groups were set up (Dairy, Beef, Small Ruminants, Africa, Asia, Latin America). All these Working Groups had one or two meetings to be introduced to the GMG initiative, to exchange existing activities in each country and breed, and to discuss options to accelerate genetic progress. Participation in the working groups varied between 15 to 50 participants including researchers, industry and service providers.

At the ICAR meeting in Bled (May 2024) two GMG sessions were held, one with invited speakers from all working groups giving the overview of

existing recording and activities, and gaps for each working group, and a second session with free contributed papers on selecting for reduced methane. Also, a hybrid GMG workshop was organised, where the developed strategy of the GMG initiative was outlined and the investment strategy was discussed. The meetings and workshops were well attended with over 100 participants (industry and research) from around the globe.

Press release

The GMG initiative has now officially been announced with this press release on April 8, 2025.

Together we will reduce methane across the major livestock-producing regions and breeds, including:

- accelerating of low-emission dairy breeding across Holstein, Jersey, Brown Swiss, and Red breeds
- implementing low-methane beef genetics in commercial and crossbred cattle populations in the U.S.
- integrating low-methane traits into beef cattle breeding programs in North America, Oceania, and Europe
- accelerating low-emission sheep breeding in Europe, Oceania and Latin America
- advancing methane-efficient breeding in Indigenous African cattle
- supporting methane efficient beef breeding in Latin America
- supporting rumen microbiome sampling and analysis across all above-mentioned projects.

Upcoming Working Group meetings

Also this year the Working Groups will meet. They are open for people interested in recording methane, in phenotypic and genetic analysis of methane emissions in ruminants, in data sharing, and in other relevant topics for this species and/or region. After presentations on 1) GMG, 2) ICAR Feed&Gas wiki page, and 3) update of running GMG-projects in a

Working Group, there will be a discussion on ideas, knowledge gaps and opportunities.

The dates for the upcoming working groups are:

- May 15, 2025 - Dairy - 12:00-13:30h CET
- May 20, 2025 - Sheep - 12:00-13:30h CET
- May 25, 2025 - Africa - 11:00-12:30h CET
- June 5, 2025 - Microbiome - 12:00-13:30h CET
- June 17, 2025 - Latin America - 15:00-16:30h CET
- June 19, 2025 - Beef - 22:00-23:30h CET

If you, or someone you know, is interested in joining a Working Group, please send us an email at gmg@wur.nl. Feel free to spread the word and forward this message!

Webinar

In the context of data-sharing for genetic evaluation, e.g. enteric methane emissions in cattle, quantifying the contributions of additional phenotypes to genetic evaluations is essential. During a webinar of Jeremie Vandenplas on **May 22**, **2025**, **14:00-15:00h CET**, a robust and practical framework will be explained for quantifying the effective contribution of phenotypic data to genetic evaluations, using the concept of effective record contributions (ERCs). Our three-step approach involves 1) computing reliabilities of a pedigree-based genetic evaluation using phenotypic information, 2) approximating ERCs free of relationship contributions from reliabilities of phenotyped animals using a reverse reliability algorithm, and 3) calculating the total effective contribution of phenotypic records as the sum of ERCs associated with all phenotyped animals.

If you would like to join this webinar, please send an email to gmg@wur.nl to sign up and you will receive the link to the Teams-meeting.

Save the date

On Sunday October 5, 2025, a joint workshop will be organised by ASGGN, GMG and the ICAR Feed and gas Working Group. This workshop is a pre-conference workshop of the 9th International Greenhouse Gas & Animal Agricultural Conference in Nairobi, Kenya. The programme is currently being finalised and more information will follow soon.

GMG partnership

Many partners (approximately 50 partners from 25 countries) are involved in the Global Methane Genetics initiative, showing a strong community of institutes and organisations with great knowledge and expertise:

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