Re-Livestock
RESILIENT FARMING SYSTEMS

Facilitating Innovations for Resilient Livestock Farming Systems

Objective

Re-Livestock is a European research project whose overall objective is to increase the resilience of the livestock sector in a climate change context.

The project will evaluate and mobilise the adoption of innovative practices and strategies to reduce greenhouse gas emissions from cattle and swine farming systems and increase their capacity to deal with climate change impacts.

Project Concept

Re-Livestock proposes a holistic approach based on the "Re-Concept" by Re-framing climate change action in livestock production systems through:

- Re-Evaluating feeding inputs and nutrient cycling
- Re-Exploring animals' adaptive capacity to integrate mitigation and adaptation
- Re-Designing livestock systems

Re-Livestock integrates animal, herd, farm, sector and region scales to comprehensively examine the factors determining livestock production resilience and the strategies to improve it.

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re-livestock.eu

Re-Livestock project contributions to the 76th EAAP Annual Meeting

Location
Innsbruck, Austria

Date
25-29 of August 2025

Session 1. How to mitigate livestock emissions through breeding

Oral Presentation: Methane emission in dairy cattle breeding programs: sensitivity of genetic parameters, economic weights, phenotyping strategies

B. Gredler-Grandl *et al.*

Oral Presentation: Multi-country genomic prediction of methane emissions in dairy cattle

C.I.V. Manzanilla-Pech *et al.*

Oral Presentation: Innovative approach to data management of methane emissions in dairy cows

M. Ryczek *et al.*

Poster: Impact of introducing methane emission traits in the breeding goal for Polish Holstein-Friesian cattle

G. Cieleń *et al.*

Session 2. Feed Additives for Methane Mitigation

Invited: Regulations and evidence requirements for authorization of enteric methane-mitigating feed additives

J. Tricarico *et al.*

Oral Presentation: A guideline to uncover the mode of action of anti-methanogenic feed additives for ruminants

A. Belanche *et al.*

Oral Presentation: Feed additives for methane mitigation: How to account for the mitigating potential of antimethanogenic feed additives – Approaches and recommendations

A. del Prado *et al.*

Oral Presentation: Recommendations for testing enteric methane-mitigating feed additives in ruminant studies

A. Hristov *et al.*

Oral Presentation: Modeling the impact of feed additives on enteric methane emission of ruminants—Approaches and recommendations

J. Dikjstra *et al.*

Oral Presentation: Recommendations for identification and selection of bioactive compounds to develop antimethanogenic feed additives

Z. Durmic *et al.*

Session 12. Dairy cows' longevity: economic, feeding, breeding, health, welfare and environmental aspects and perspectives

Oral Presentation: Environmental and economic impacts of extending the productive lifespan of swiss dairy herds in diverse husbandry systems

M. Lozano-Jaramillo *et al.*

Session 14. Livestock farming systems for the next generation: can we imagine the future?

Invited: How nutrition can help to shape the future of livestock farming systems

D. Yáñez-Ruiz *et al.*

Invited: Challenge voice – Thinking the future food systems

W. Simon et al.

Session 16. Novel technologies for phenotyping and scientific trials

Oral Presentation: A comprehensive genetic evaluation of molecular phenotypes in pigs: gaining knowledge through metabolite ratios

S. Bovo *et al.*

Session 23. Selection for efficiency, resilience, and climate adaptation

Oral Presentation: Untargeted metabolomics describes genetic factors that influence pig metabolism for adaptation traits in a Duroc line

S. Bovo *et al.*

Oral Presentation: Between heat tolerance and resilience: breeding against rising heat stress in the Dutch Holstein cattle

T. Pook *et al.*

Poster: Impact of including novel heat stress indicators on the genetic progress of Iberian pigs

N. Pycinskai *et al.*

Session 24. Animal nutrition in circular economy

Oral Presentation: In vitro effects of bakery by-products on rumen degradability, fermentation, and methane yield

C. Christodoulou *et al.*

Session 33. Integrating animal microbiomes and host genetics - Holobiont; Where the host meets the guest: the holobiont concept in 1) Ruminants & 2) Monogastrics

Oral Presentation: Comparative analysis of the cattle rumen microbiome across three countries using long-read metagenomic sequencing to identify its use for methane reduction

D. Flossdorf *et al.*

Session 34. Monogastric nutrition, management and product quality

Oral Presentation: Effects of low-protein diets partially balanced in essential amino acids and pen cleaning frequency on growth, protein efficiency and carcass characteristics in growing-finishing pigs

A. Antonacci *et al.*

Poster: Comparing metabolomic profiles among three Italian heavy pig breeds

S. Bovo *et al.*

Session 41. Algae, fungi, yeast, and cellular feeds, feed ingredients/additives

Poster: Effects of microalgae on in vitro rumen degradation, fermentation characteristics, and methane yield

C. Christodoulou *et al.*

Session 73. Feeding, beef semen use, marketing strategies to improve health, well-being, productivity, and climate impact of dairy beef calves in various beef production systems

Oral Presentation: Farming system is the main driver of enteric methanogenesis in grass-based veal calves

G. Mesbahi *et al.*

Session 75. Sustainability assessment of livestock farming systems

Oral Presentation: Assessing the sustainability and ecosystem services of farming practices of dairy cattle farms

A. Mantino *et al.*

Session 77. Welfare and behaviour measurements using precision livestock farming tools and big data: from validation to application

Oral Presentation: Identifying shade-seeking behavioural triggers in Holstein heifers for improved heat stress management and welfare

X. Díaz de Otálora *et al.*

Session 79. Future pig and poultry production systems

Oral Presentation: Impact of housing design and animal level ventilation on pig growth and air quality

Hlel *et al.*

Session 81. Challenges for livestock physiology: perturbations and adaptation

Oral Presentation: Describing adaptation to heat stress through untargeted metabolomics in pig genetic resources

M. Bolner *et al.*

Partners

Re-Livestock brings together scientific, technological and farming expertise from thirty seven partners working on a diversity of dairy, beef and pig production systems throughout Europe.

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