



Sustain Sheep

Newsletter



Sustain Sheep
Green Breeding

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Introduction

Sheep production is a contributor to greenhouse gas emissions, particularly methane released through enteric fermentation.

Sustain Sheep project explores the potential of genetic improvement as a cost-effective solution to reduce these emissions.

Sustain Sheep highlights the growing evidence that breeding sheep for reduced methane emissions can be highly effective, building upon previous research and international collaboration.

Sustain Sheep seeks to address the under-adoption of genetic improvement as a mitigation measure by developing robust scientific methods and policies that ensure these gains are captured in national greenhouse gas inventories, contributing to emissions reduction targets.

Project Overview

Reduce **methane emissions** in sheep production through **breeding**



Sustain Sheep Objectives & Impact

Key Objectives



- Integrate genetic merit for low environmental impact into national breeding schemes.
- Use portable accumulation chambers (PACs) to measure methane emissions from sheep.
- Align international efforts for standardized genetic improvement approaches.

Expected Impact



- Enhanced efficiency in sheep farming systems, reducing GHG emissions and improving productivity.
- Tools for farmers and policymakers to compare methane emissions and implement effective breeding strategies.
- Support for policy measures to increase adoption of genetic improvements in the sheep industry.



Project Structure

The project is structured in four Work Packages

1

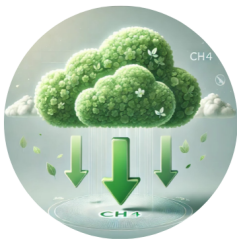
Review of current science



Reviews the current state of science on breeding sheep for reduced methane emissions, identifies knowledge gaps, and evaluates genetic evaluation systems worldwide.

2

Genetic control of methane emissions from sheep



Collates data on genetic parameters and correlations with other important traits. It explores methods for measuring or predicting feed intake and methane emissions, and models the reduction potential from breeding.

3

Estimating uptake and impact of policies



This package forecasts the uptake and impact of breeding for reduced methane emissions, evaluating the cost-effectiveness of various policy approaches.

4

Knowledge transfer and exchange



Focuses on stakeholder engagement, defining communication strategies, and ensuring effective dissemination and implementation of project results.

International Partners

An Old-New research network



Sustain Sheep, although new, builds on successful collaborations from previous initiatives like GrassToGas and SMARTER. The project brings together key countries involved in researching and measuring methane emissions from sheep, including Ireland, the UK, Uruguay, Norway (funded partners), and France and New Zealand (self-funded partners). Australia's AGBU is also contributing, sharing knowledge to align strategies with the project's goals.



A key advantage is that all partners use the same cutting-edge technology -Portable Accumulation Chambers (PACs)- to measure methane emissions from individual sheep, enabling highly coordinated and impactful research. Each country has its own research programs, and **Sustain Sheep** aims to align these efforts to maximize global impact in reducing methane emissions and enhancing sustainability in sheep production.



News & Next Steps



Upcoming Survey on Genetic Tools for Methane Mitigation

In the coming weeks, we will launch an online survey to gauge awareness of genetic tools that reduce methane emissions and improve climate change adaptation. This survey, conducted both at the start and end of the project, will engage key target audiences and include questions on preferred communication channels. *Stay tuned!*



Sustain Sheep, take me home!

We invite you to listen to our country-style song about the project on YouTube. Just scan the QR code below. We hope you enjoy it!



Podcast

We invite you to listen to the *Sustain Sheep Project* podcast on Spotify, featuring the first episode created with AI.





Conclusion

The **Sustain Sheep** project aims to leverage genetic improvement to reduce methane emissions from sheep production, creating a cost-effective and sustainable solution. **Sustain Sheep** emphasizes the importance of international collaboration to align research efforts and develop standardized approaches to genetic improvement for methane reduction.

By working together, the participating countries will provide farmers and policymakers with the tools and knowledge necessary to implement effective breeding strategies, supporting the development of more sustainable sheep farming systems globally.

