

Selecting sheep for reduced methane emissions

Farmers 'must make rapid changes to prevent climate damage'



Selecting sheep for reduced methane emissions



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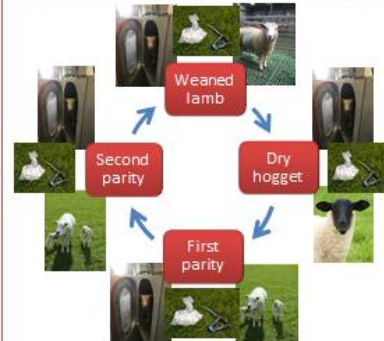
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- Objective:**
- 1) To validate methods of determining methane (CH₄) and dry matter intake (DMI) &
 - 2) Using genetics to reduce the environmental 'hoofprint' of sheep

How can we measure methane emissions in sheep?



Relationship between methane and DMI across life-stage



Can we select animals to produce less methane?

Investigate the impact of

- Sire type
- Strain
- Genetic merit

On CH₄ emissions and DMI

International Collaboration

- New GrassToGas Project
- Develop predictors of feed intake and methane emissions

Emissions from agriculture continue to rise - EPA

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AN IRISH VS NEW ZEALAND COMPARISON NICOLA FETHERS



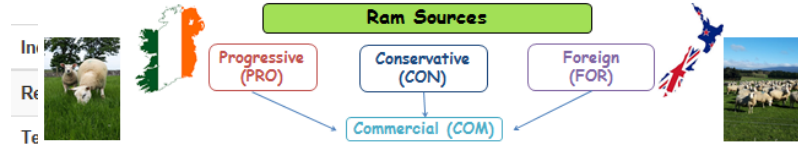



Genetic benefits of using high genetic merit rams from New Zealand or Ireland in the Irish sheep industry

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Background
 INZAC highlighted a **potential benefit** from using **superior genetics** from Ireland or New Zealand.

Objective
 To assess the importance of using **high genetic merit** animals in the sheep industry.

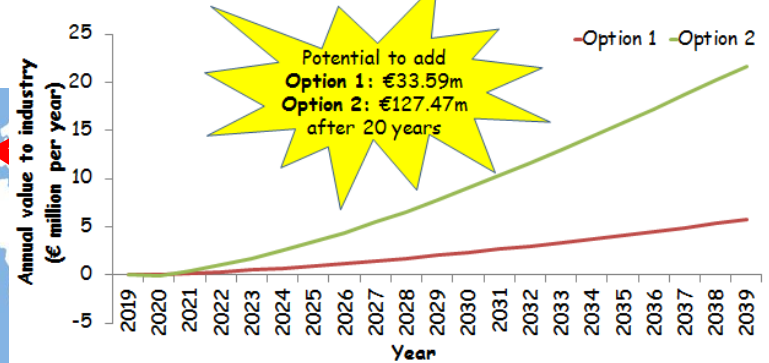


Results

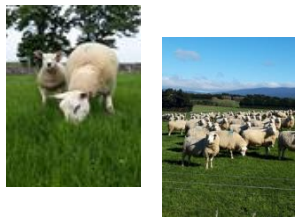
Current Scenario: 93% of sires used in Ireland are not selected on their genetic merit potential

Option 1: Increase the use of high genetic merit rams from NZ or Ireland (no shift in market share)

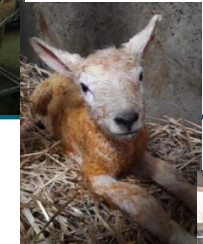
Option 2: Increase the use of high genetic merit Irish rams by industry (increase market share by 5% per year)



Recommendations
 Enormous benefits can be made with widespread use of high genetic merit sires



abacusbio









Percentile	Stars
1	★
1	★
11	★
9	★
3	★
4	★

Development of International Genetic Evaluations in Sheep

Why?

Current genetic evaluation systems **not comparable** between countries

Data



Results

