Collection of Enteric Methane Data

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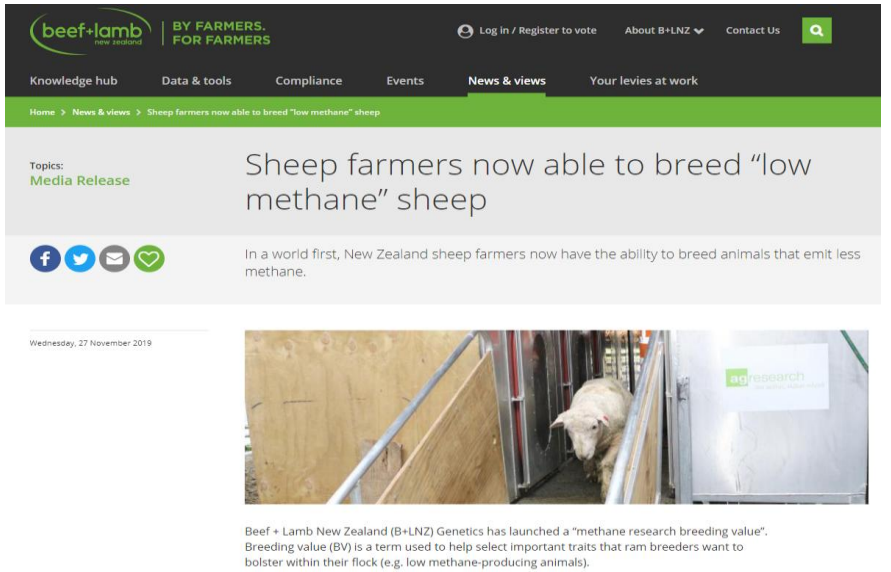
Sheep Ireland Industry Meeting, 11th December 2025

Why measure methane in sheep?

- Increasing efficiency, productivity and profitability in the national flock
  - Identify high and low emitters in the flock
- Refine Irelands inventory values
- Reach our national environmental targets
  - 2030 - Reduce Irish Agricultural GHG emissions by 25%
- Develop breeding values for methane



Methods of measuring methane

Sheep Ireland
www.sheep.ie

PAC

Respiration chamber

GreenFeed

SF_6

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Portable Accumulation Chamber (PAC)

Sheep Ireland
www.sheep.ie

Methane measurements collected using PAC

Animals in good grass > 5cm

Removed from feed 1 hr prior

Live-weight recorded

PAC 50mins

CH_4, CO_2 and O_2 at 0, 25 & 50 minutes

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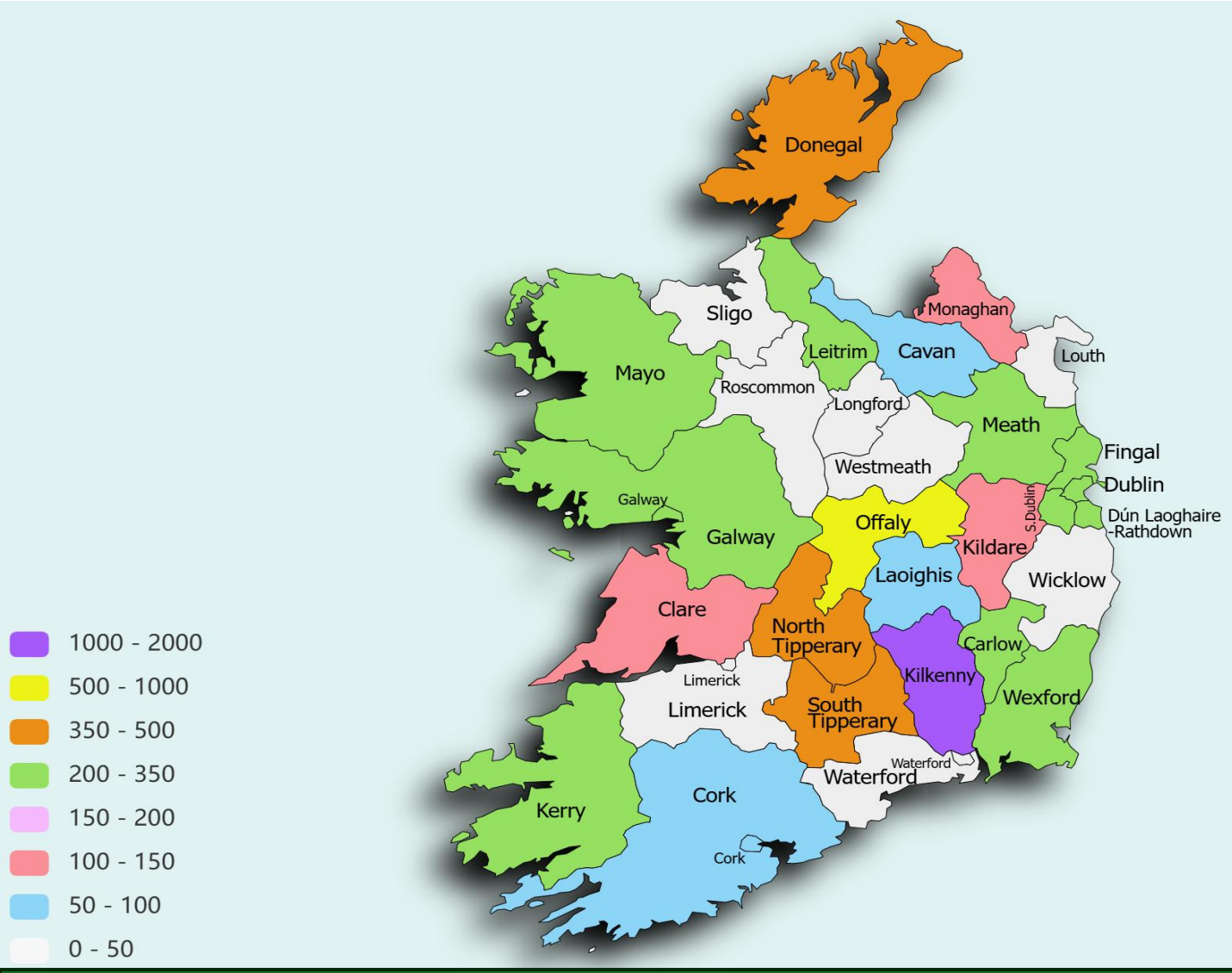
Farms visited to date



Genetics of methane

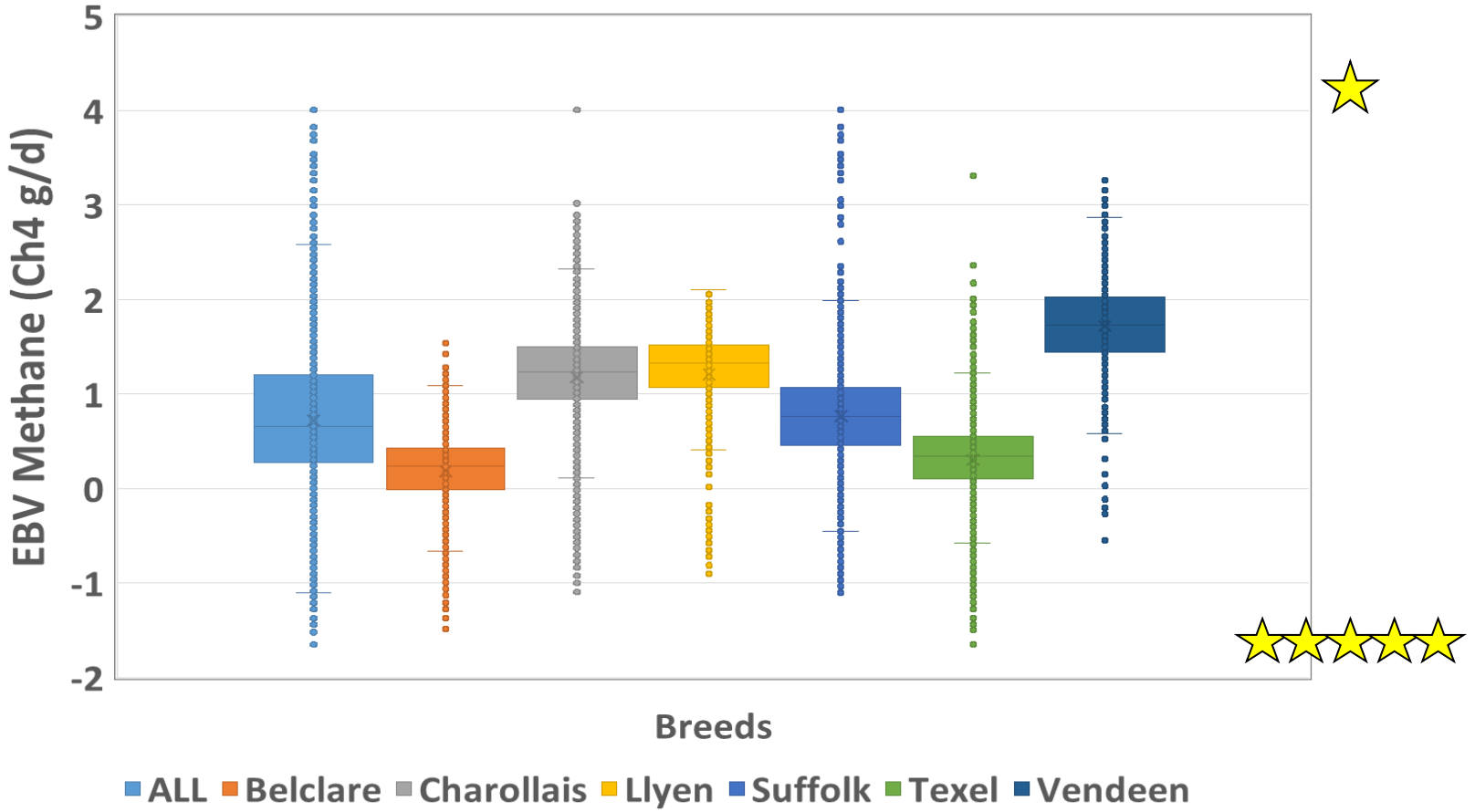
Sheep Ireland
www.sheep.ie

Variation between animals for methane?

Records available ~19,000

Results to date:

- Heritable → 18 to 31%
- Repeatable → ~35%



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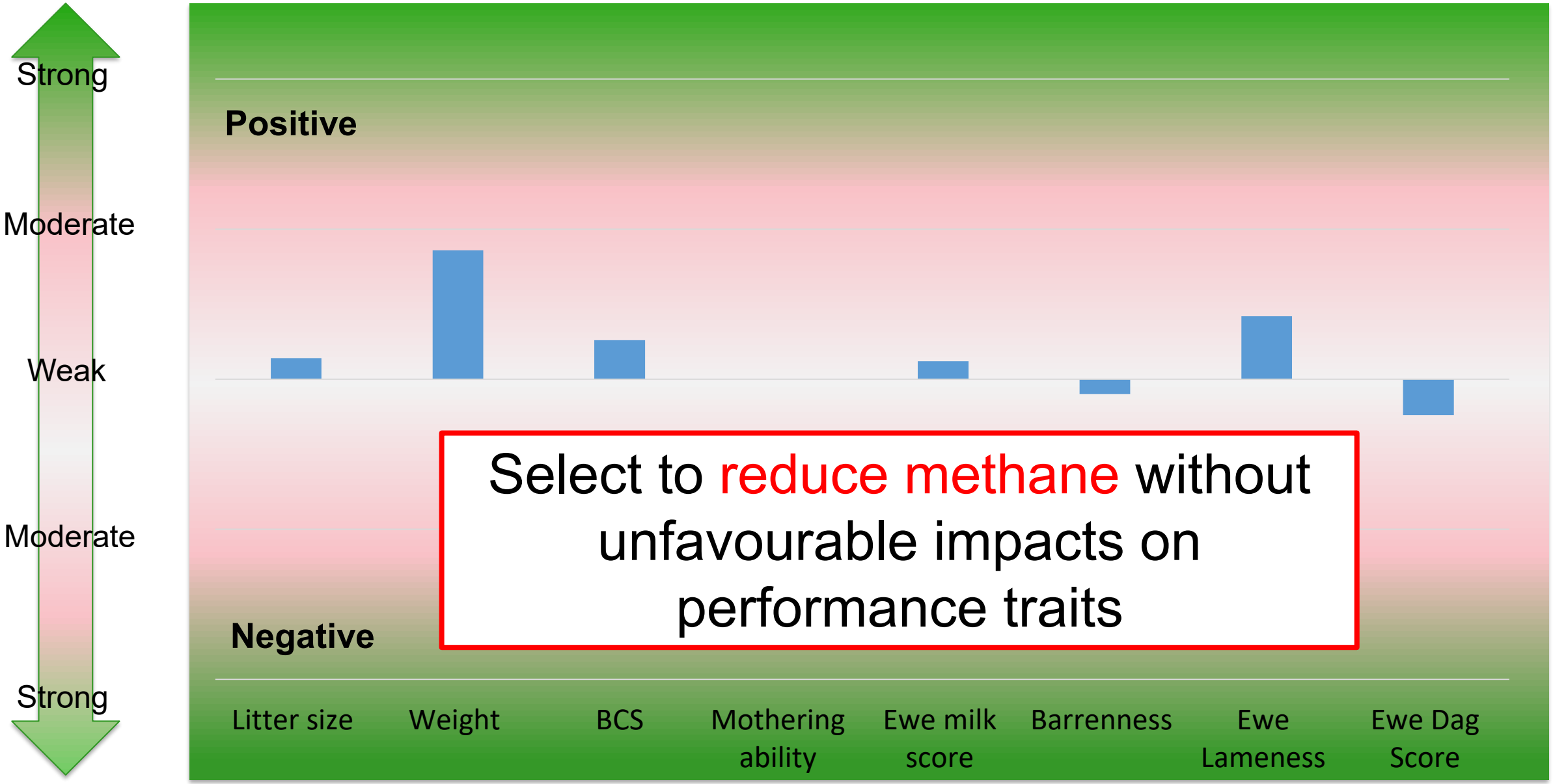
Correlations with other traits



Thank you for listening!

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