

Methane Index for Grass Silages:

A standardize Tool for Benchmarking Methane Emissions Globally

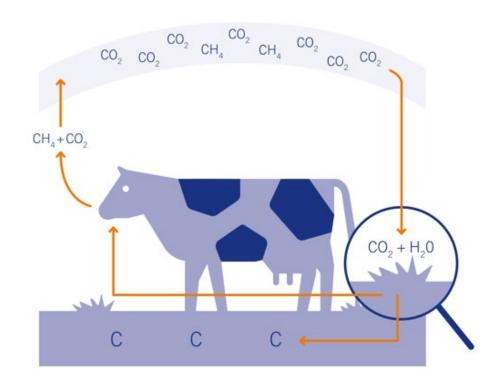
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What is Methane?

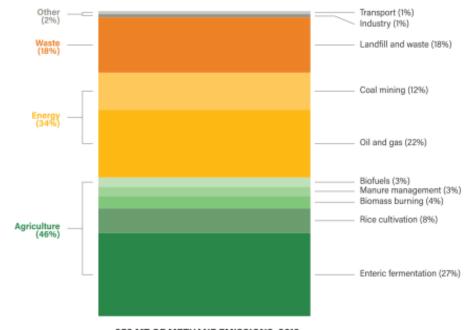




 $0.3^{\circ}C = 32.54^{\circ}F$

1.5 °C = 34.7 °F

Nearly half of methane emissions come from agriculture



352 MT OF METHANE EMISSIONS, 2019

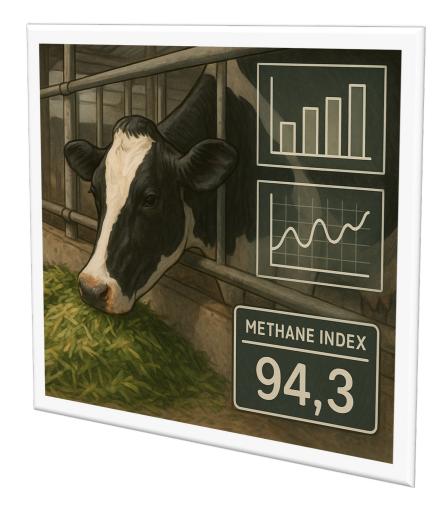
Source: FAO 2024b; UNDP and Climate and Clean Air Coalition 2021.



Objective



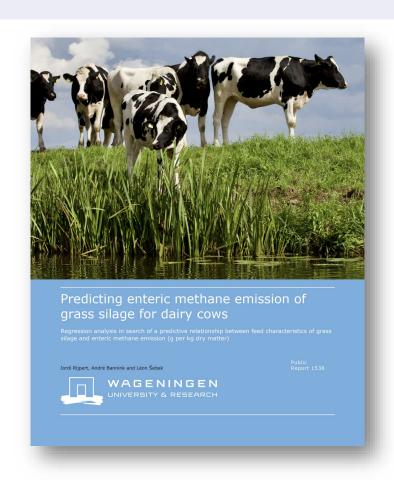
- Development of the Methane Index
- Benchmarking and supporting methane reduction strategies



Materials & Methods



- Wageningen University models
 - Šebek et al, 2024
- Sample sizes:
 - European pool: 47.500 samples from '22/'23
 - Dutch pool: 350.000 samples from '15-'24
- Models used are in kg/DM
 - Transformed to kg/D-OM



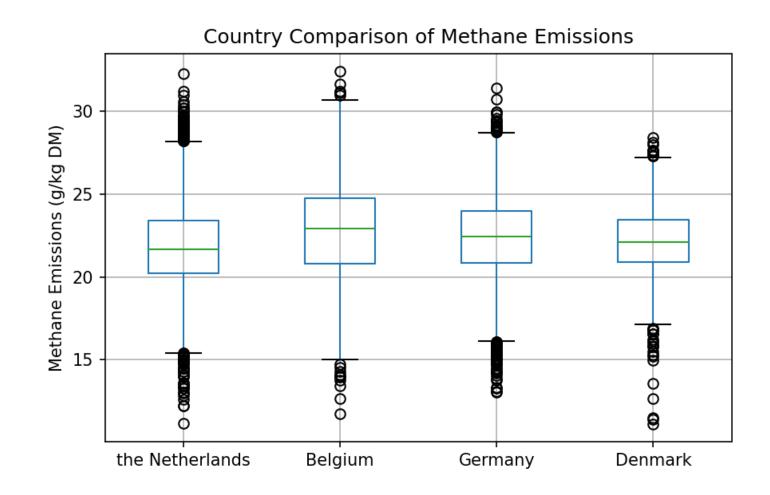
Funded by:



Results – Country Comparison

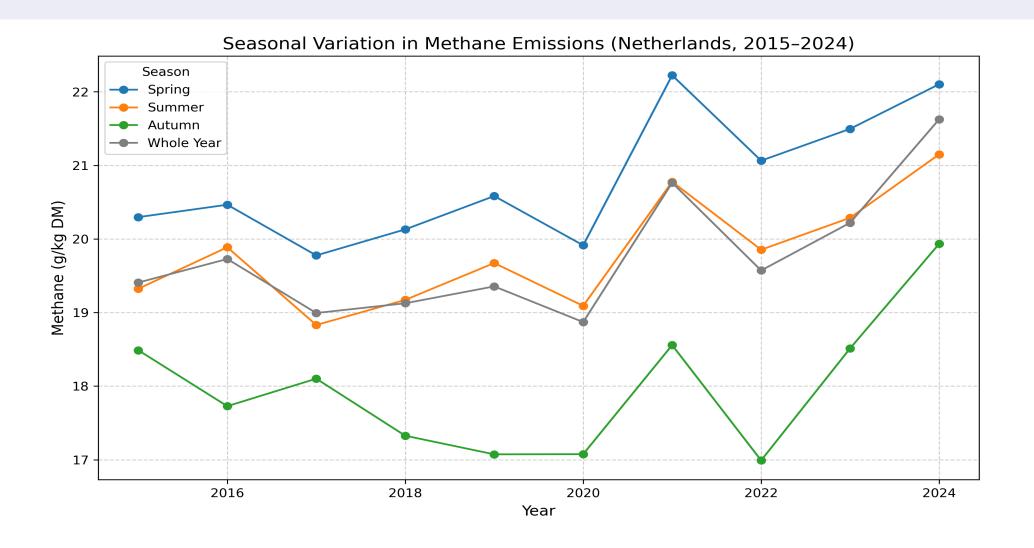


- Netherlands lowest, Belgium highest emissions
- IQR-differences



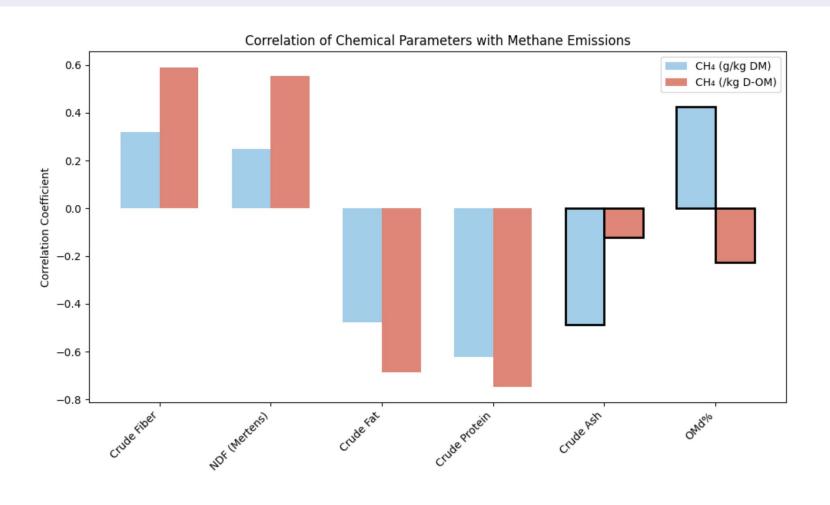
Results – Seasonal Variation





Results – Chemical interactions

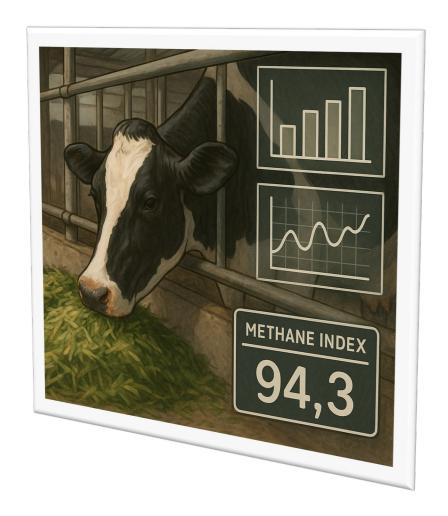




Methane Index



- Country averages insufficient
- g/kg DM not practical
- Index corrects for seasonality and year
- Useful for benchmarking and management





Testing for Life



