

Estimating the Carbon Footprint of Milk Production on Farms: Developing a Decision Support Application for Climate Control in the Dairy Sector

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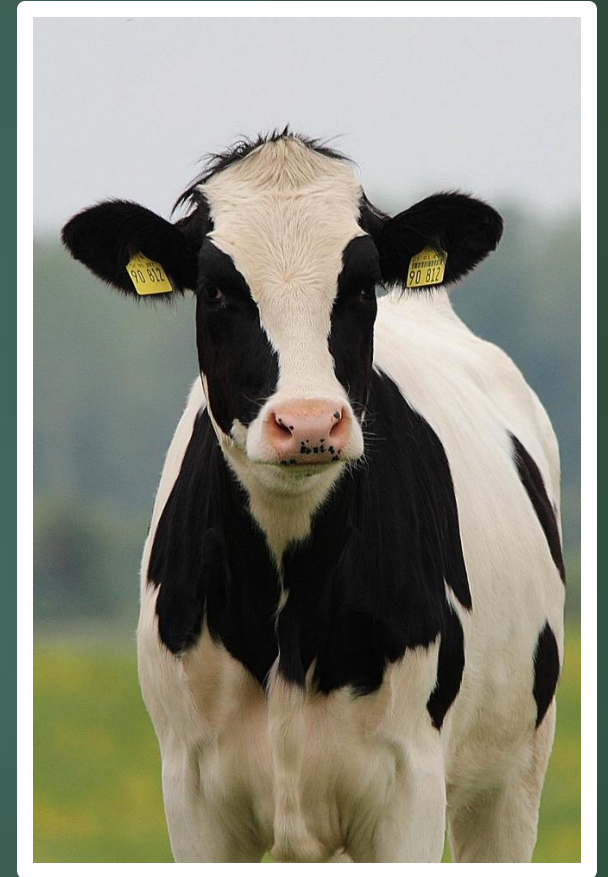
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Dairy market status

2

- Increasing pressure to measure and reduce environmental impact;
- Implementing specific requirements for dairy farmers in more and more countries;
- Currently, no mandatory national regulations in Poland;
- Dynamic situation, likely to change.



Preparing our dairy farmers

3

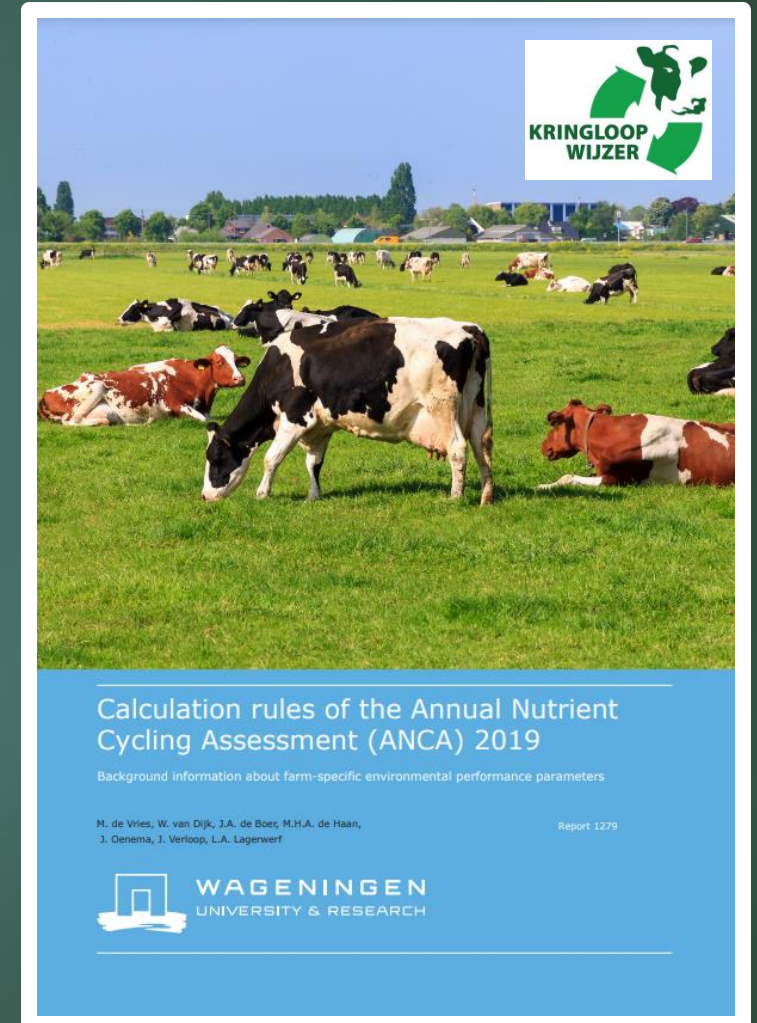


- Voluntary sustainability requirements;
- No national tool for estimating environmental impact of dairy farms;
- Available tools:
 - not adjusted to polish conditions,
 - not user-friendly.
- High demand for creating such tool – SUP-RIM Project.

Measurements

4

- Annual Nutrient Cycling Assessment (ANCA) tool;
- CO₂eq per kilogram of fat-and protein-corrected milk (FPCM);
- 42 dairy farms in the whole country were analyzed;
- Large diversity of analyzed farms.



Milk production per cow on farms

5



Extensive



Intensive



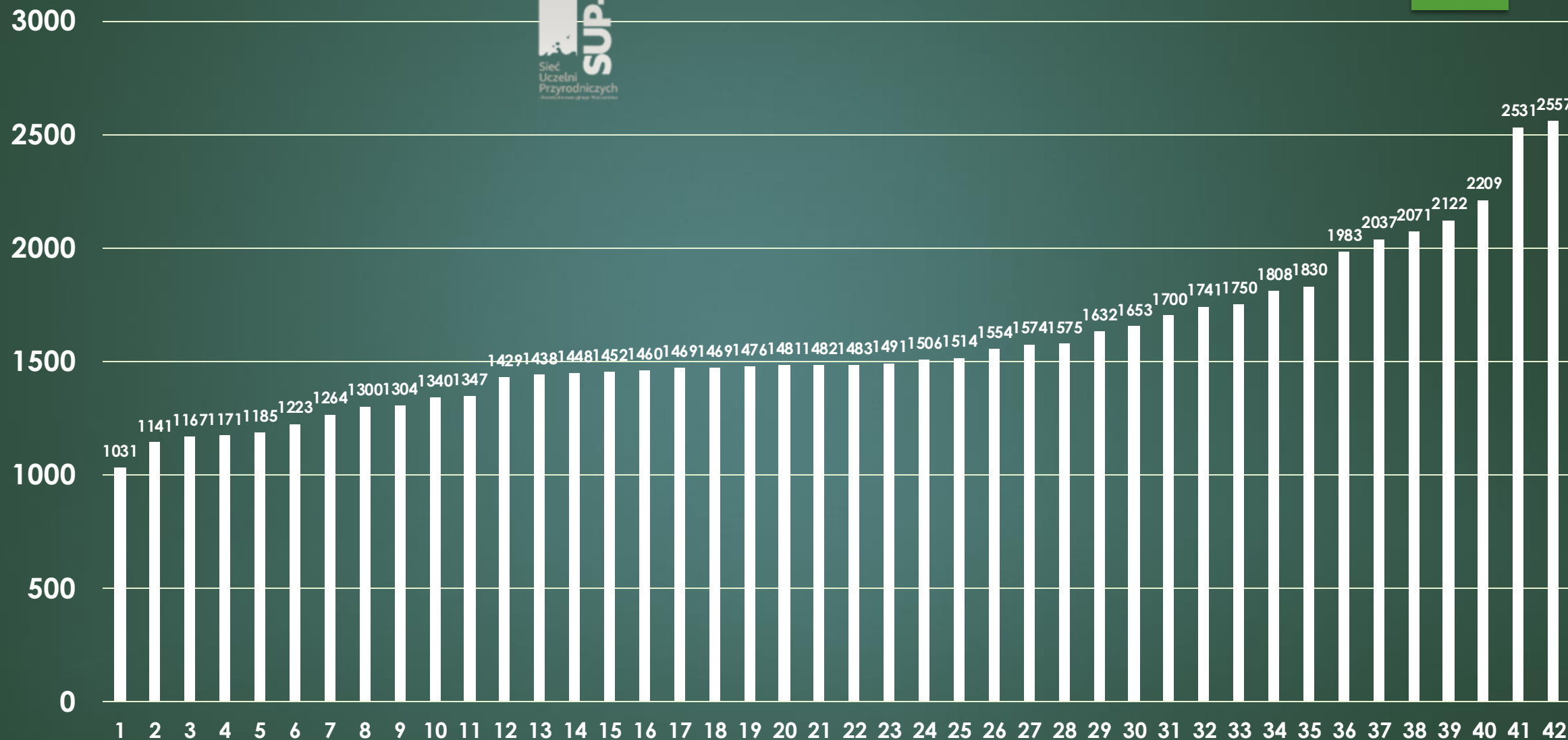
Carbon footprint of farms

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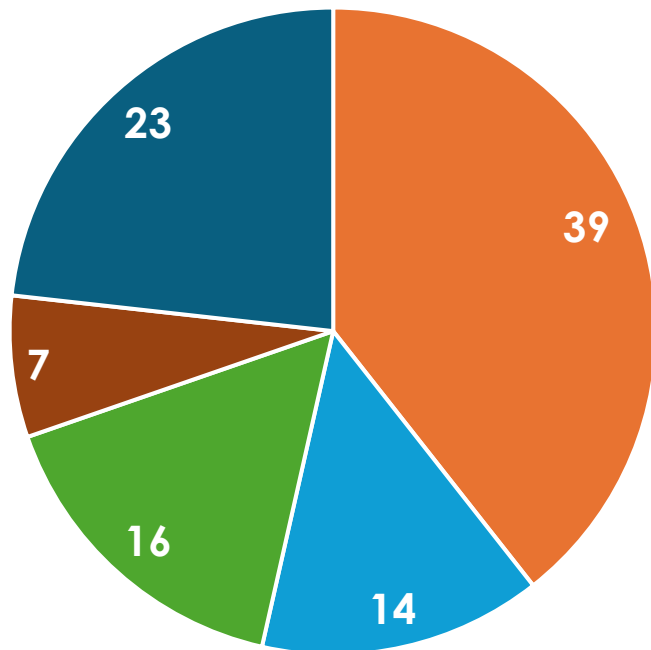


CO₂eq/kg FPCM



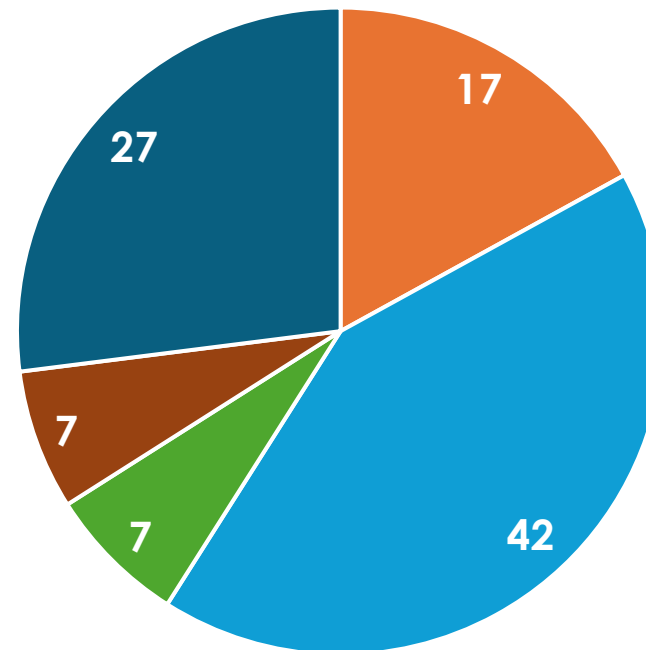


1031g CO₂eq [%]

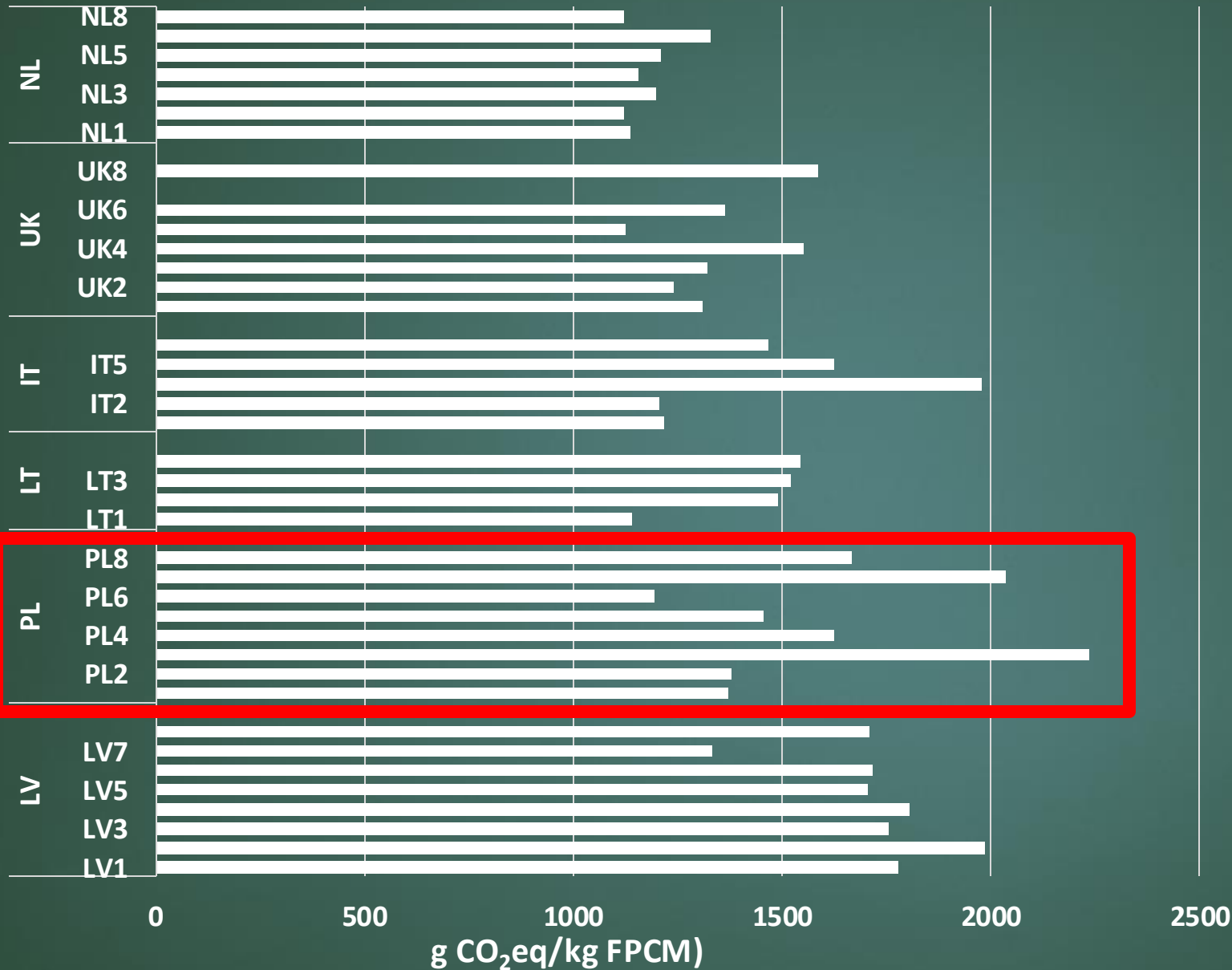
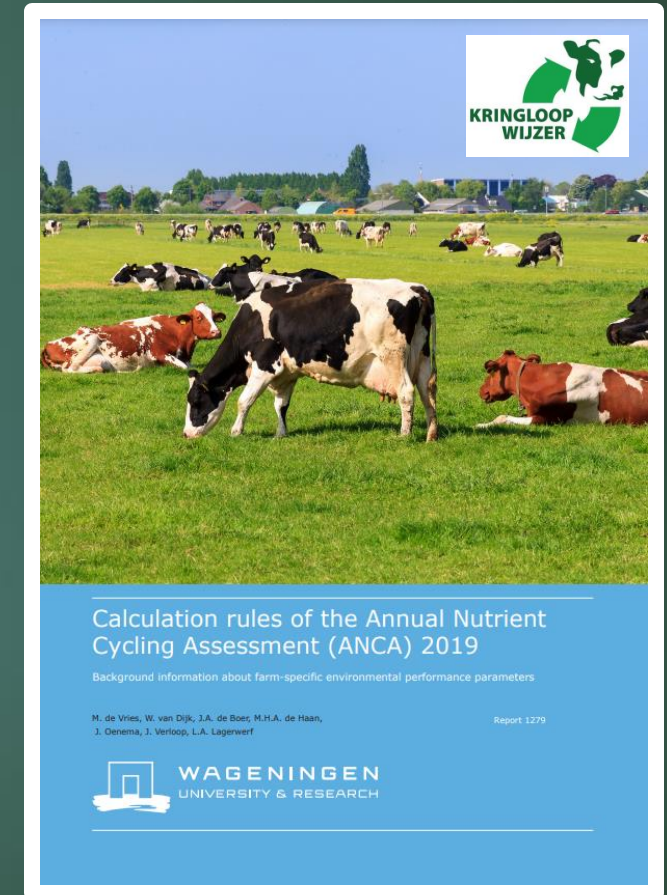


- Ruminal fermentation
- Barn and stored manure
- Producing feed
- Use and production of energy
- Import sources to farm

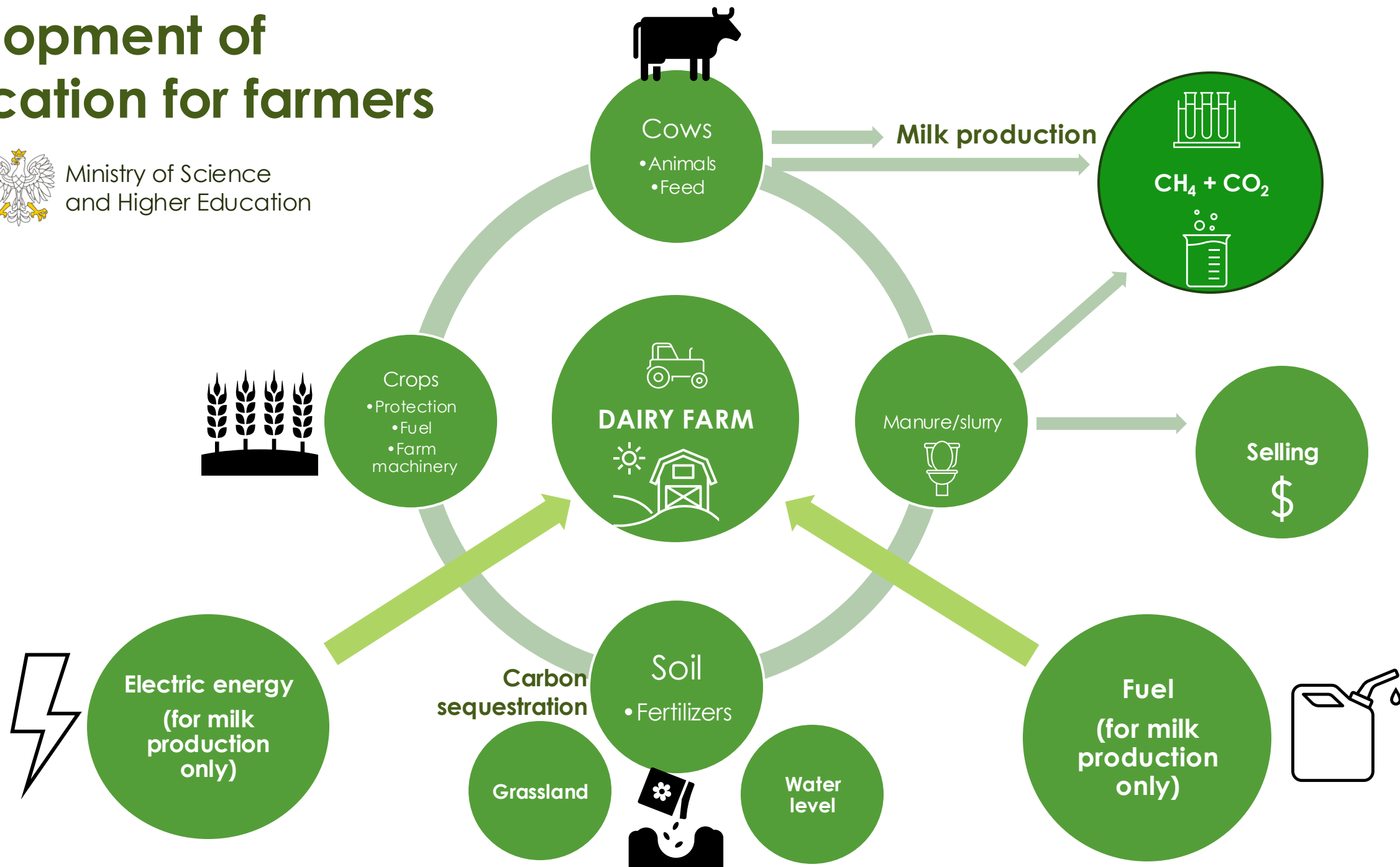
2557g CO₂eq [%]



- Ruminal fermentation
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- Use and production of energy
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Development of application for farmers



Benefits for the dairy sector

11



Estimated
carbon
footprint

Implementing
reduction
strategies



Provided
reliable
data

Simple
carbon
footprint
reporting

Ready for upcoming regulations





Thank you for your attention!

