



Accounting for diversity while assessing sustainability

Insights from the Walloon
bovine sectors

ELI Day – 19 May 2022



A necessary transition

The **role and share of livestock** productions in our food system are being questioned.

A **transition** is necessary towards more sustainable livestock systems.

Environmental



Negative externalities

- GHG emissions
- Pollution of water and soil resources

Positive externalities

- Carbon storage
- Contributions to soil fertility

Societal & health



- Animal welfare
- Non-Communicable Diseases

- Preserving landscapes
- Provision of nutrient-dense food

Economic

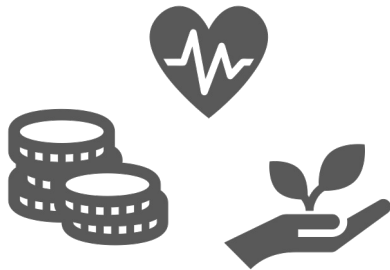


- Economic precarity of some farmers

- Provision of livelihood for many households

Two tools to identify sustainable livestock systems

Sustainability assessments



Indicators

Measure performances



Diversity assessments



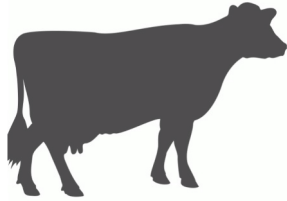
Typology classifications

Identify production systems

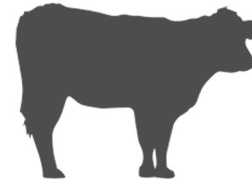
Rely on

To

Scope of the study



Dairy systems



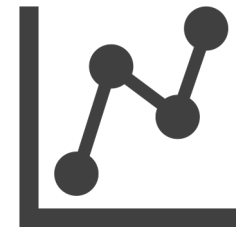
Beef breeding systems



Wallonia



290 dairy farms
216 beef breeding farms

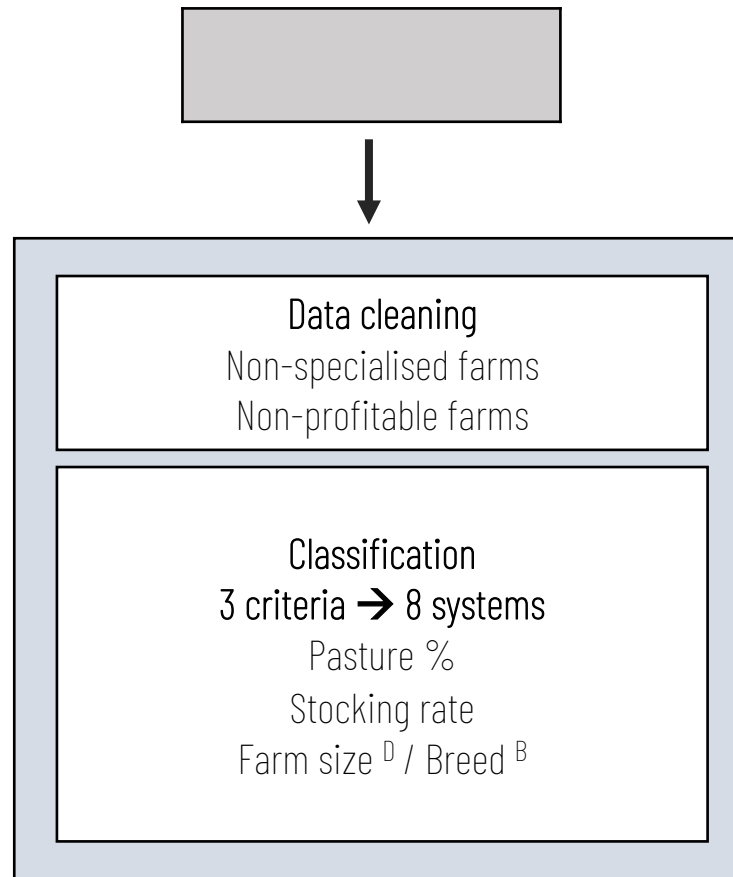


4 years
2014 – 2017

A two-step methodology

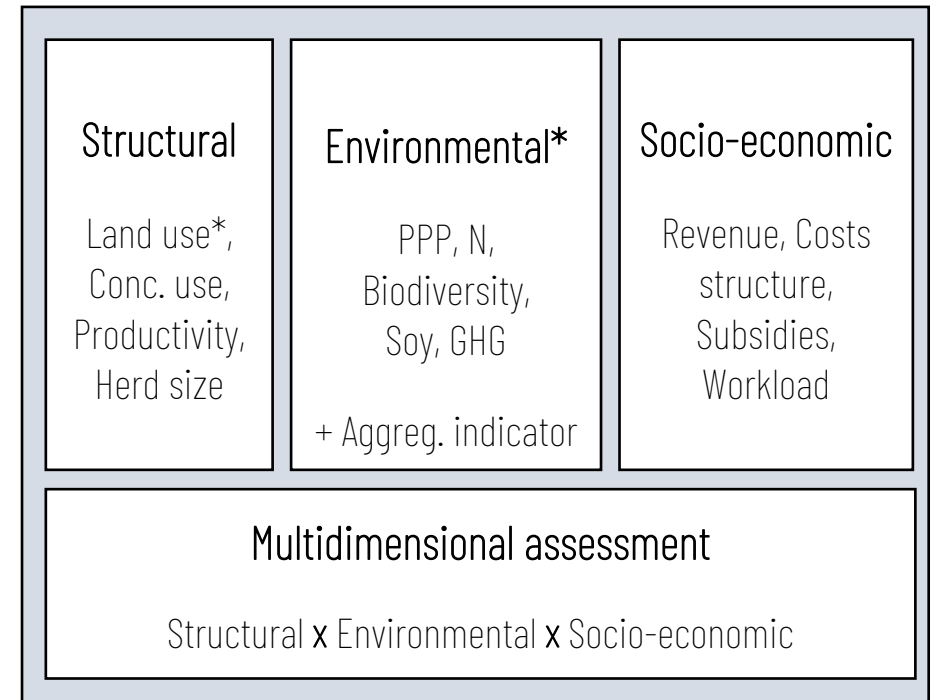
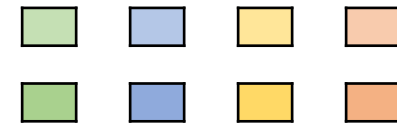
I. DIVERSITY ASSESSMENT

Initial sample - Unclassified



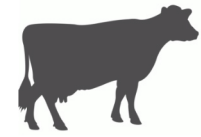
II. SUSTAINABILITY ASSESSMENT

Final sample - Classified

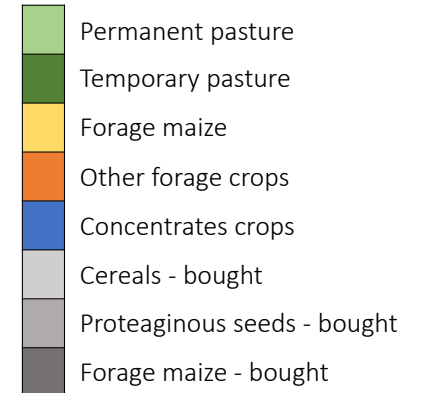
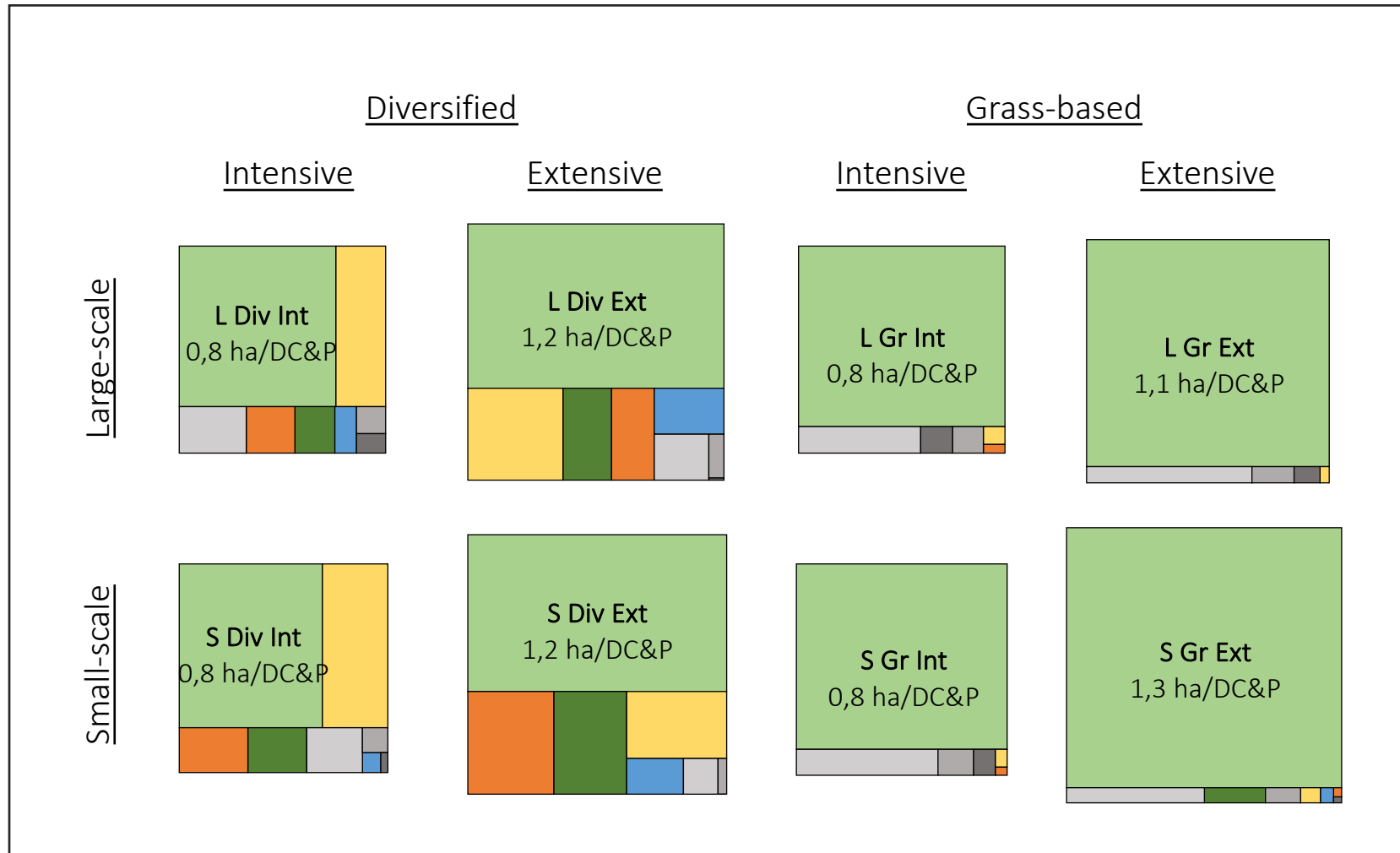


* Estimated indicators, not included in core dataset.

A diversity of systems coexist



Dairy systems



Note:

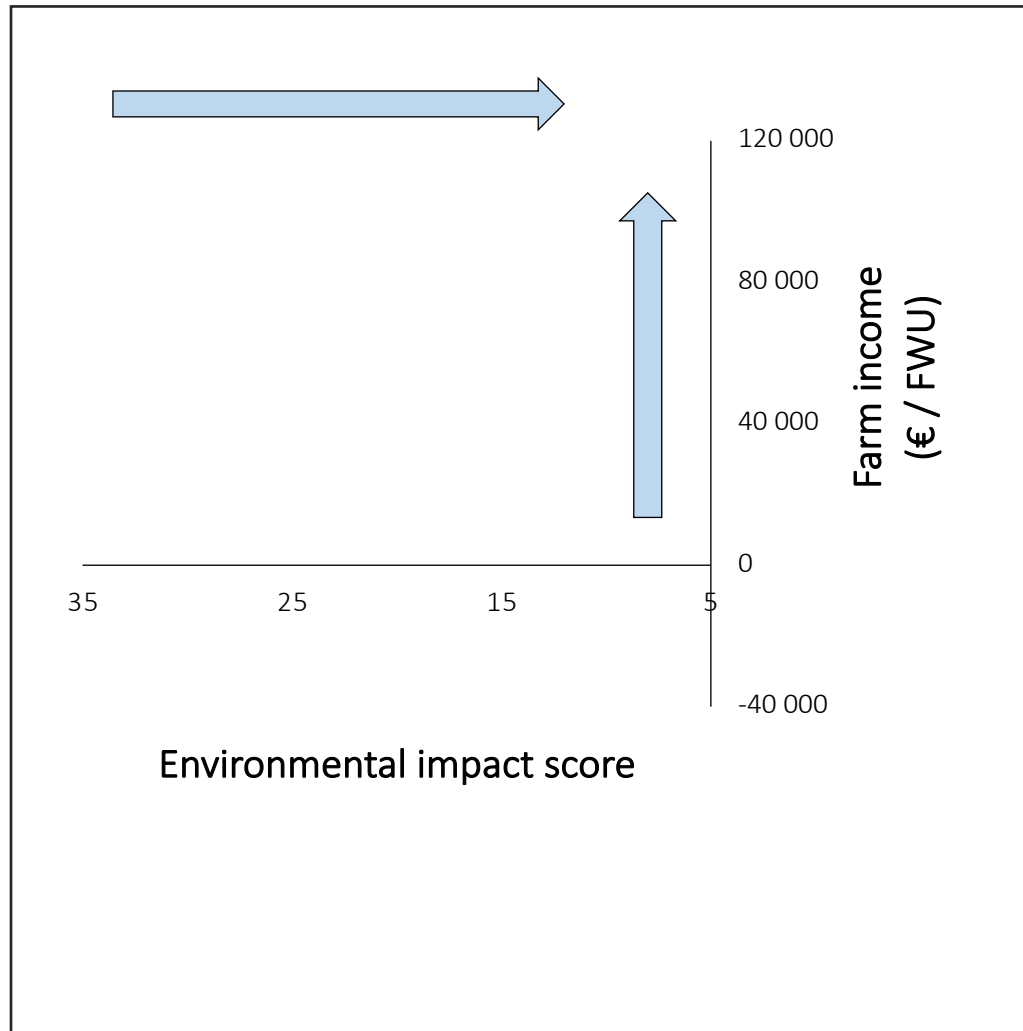
The size of the squares is relative to the average area use of each system (expressed in hectares per cow and progeny).

DC&P : Dairy Cow & Progeny
SC&P : Suckler Cow & Progeny

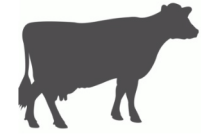
Diversity is key to grasp sustainability challenges



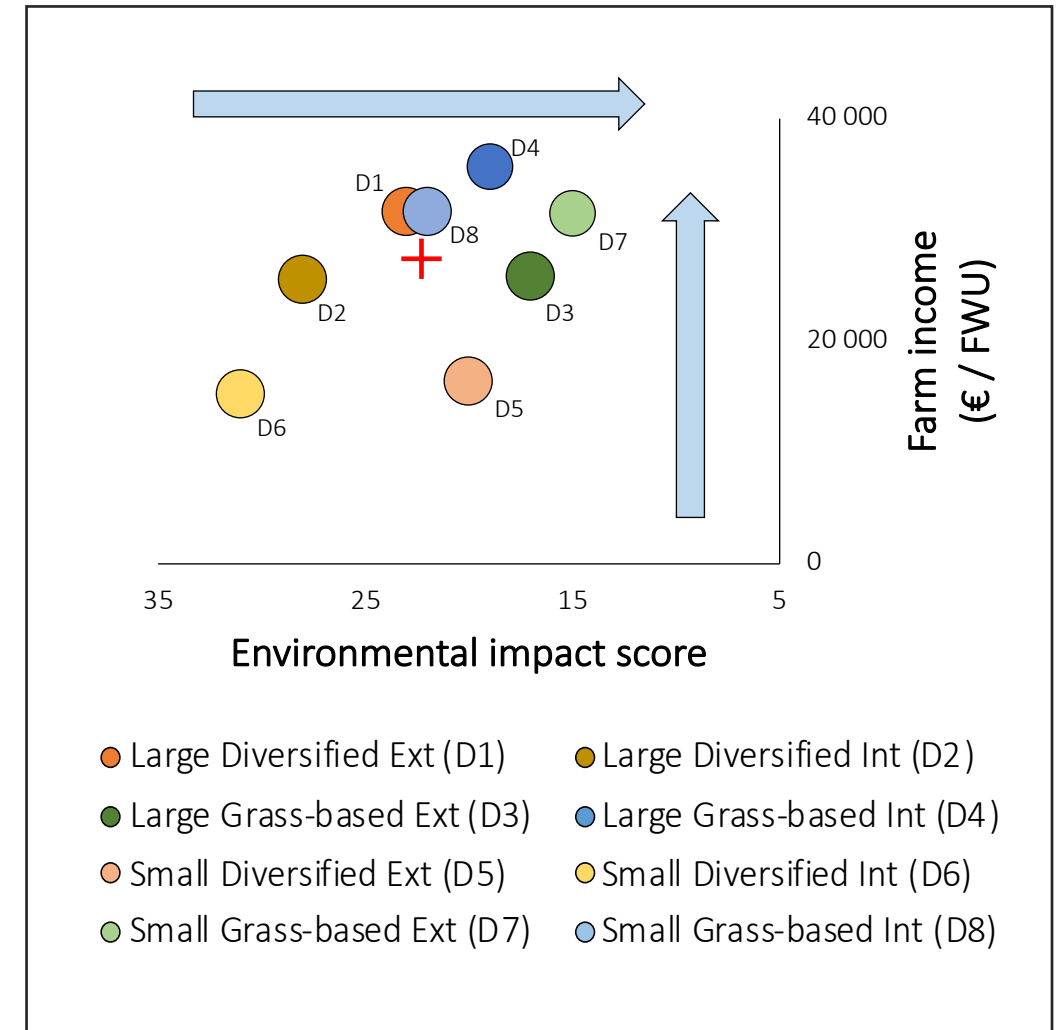
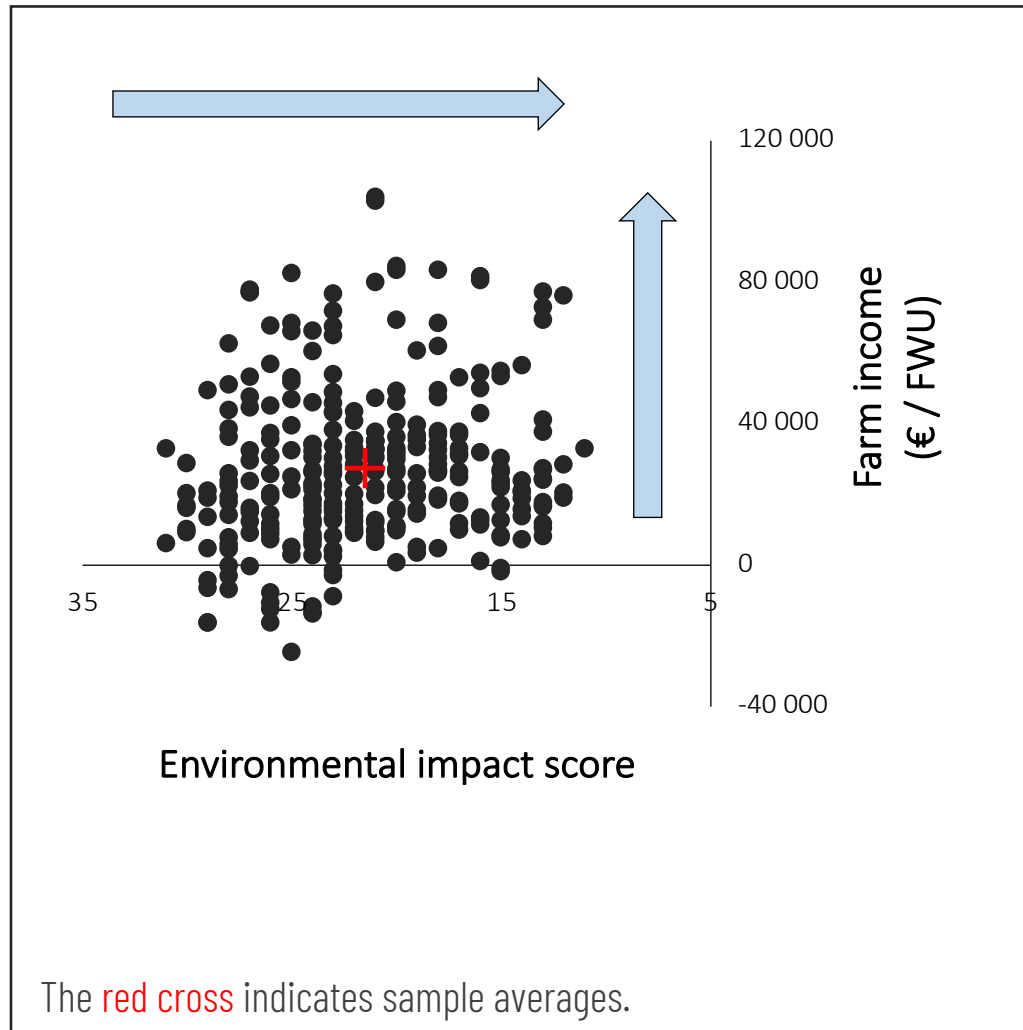
Dairy systems



Diversity is key to grasp sustainability challenges



Dairy systems





Conclusions

- A diversity of systems coexist, which is reflected at several levels :
 - Structural characteristics
 - Environmental performances
 - Economic models
- Overcoming trade-offs between economic and environmental performances is possible.
- Diversity is key to better grasp sustainability challenges.
- Grass-based and extensive systems present the best combined performances.

Thank you for your attention !



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