The *LIFE GREEN SHEEP* project:
demonstration and dissemination actions to reduce Carbon footprint in sheep farming
The case study of the sustainable Sardinian PGI lamb

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AGRIS Sardegna

The Life GREENSHEEP Project

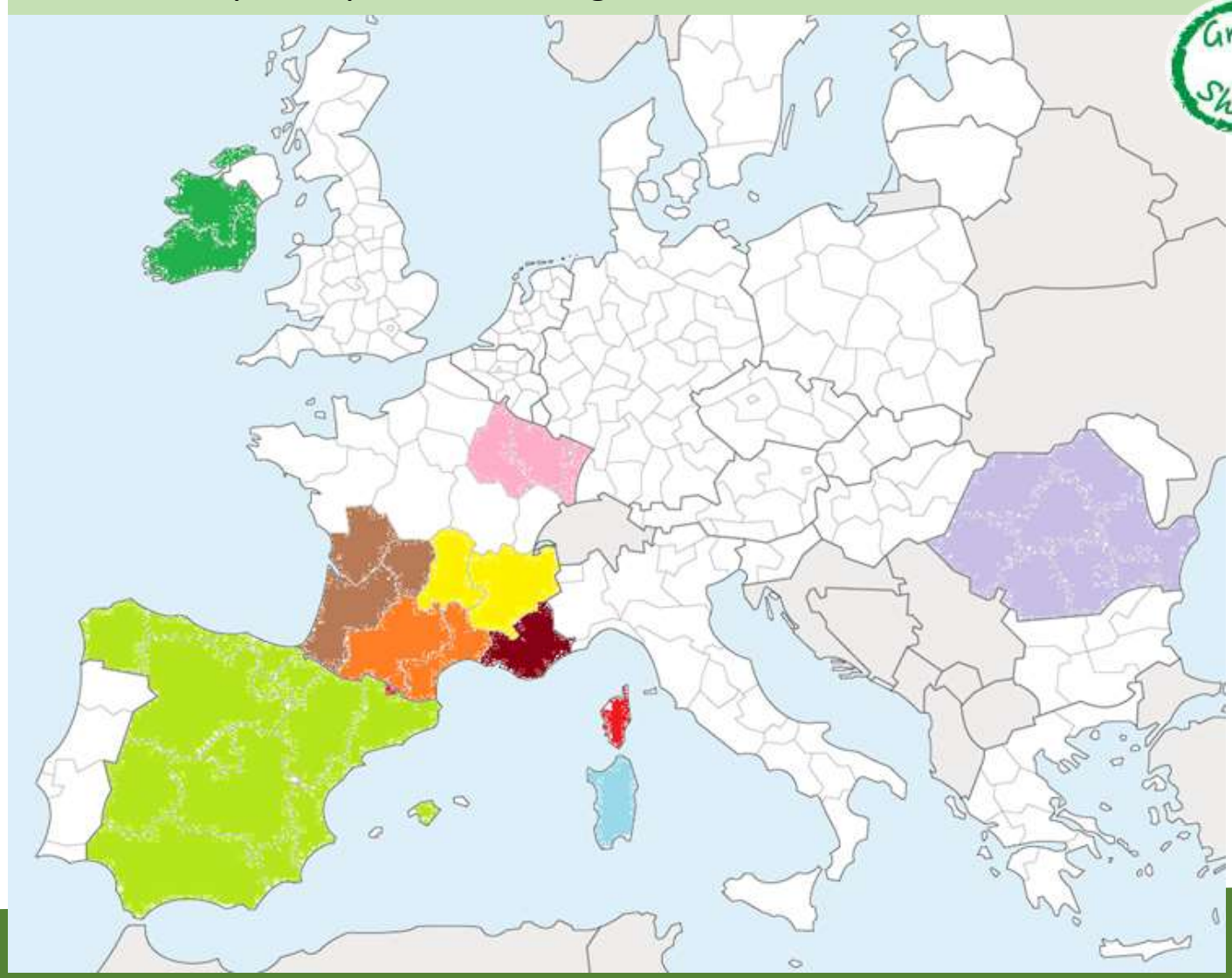
- France (Idele, FBL, Interbev, ARO NA)
- Italy (AGRIS, UNISS, LAORE)
- Ireland (Teagasc)
- Romania (INCDBNA)
- Spain (NEIKER, Lurgintza, Oviaragon, Itacyl)

- 5 years

- from October 2020 to September 2025

- 4 500 000 € financed by EU LIFE up to 55%

The project involves the five countries which are representative of the EU's sheep farming systems for both meat and dairy production. In fact, approximately 47% of European sheep meat production and 63% of sheep milk production originate from these nations.



ACTIONS

- Reduce the carbon footprint of milk and meat production on sheep farms by 12%
- Establish a national and European observatory for eco-sustainable sheep production systems
- Launch a national and European-level initiative for the assessment and advancement of low-emission sheep farming
- Promote innovative practices related to emission mitigation to ensure the technical, economic, social, and environmental sustainability of sheep farms
- Increase awareness and educate both current and future generations of farmers and technicians about these issues

CAP'2ER®, two levels – one software

CAP'2ER® Level 1: an educational tool for general public, students, farmers, and technicians, designed to raise awareness and conduct an initial rapid assessment of environmental performance.

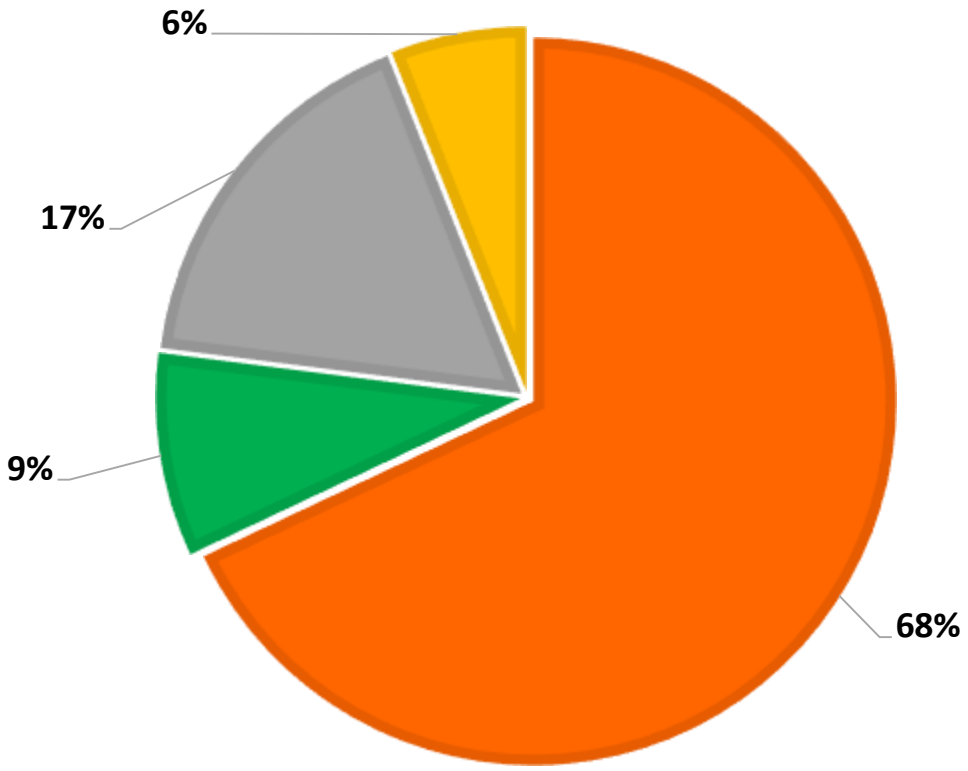
- 20 data
- 30 minuts for the results
- sensibilation observatory

CAP'2ER® Level 2: A decision support tool designed for consultants and technicians aiming to conduct a comprehensive environmental footprint assessment, pinpoint areas for improvement, and develop action plans.

- 150 data
- 3 hours for the results
- validation simulation database

Distribution of environmental emissions

CH_4, N_2O e CO_2



- animals
- farm's crops
- purchased feeds
- energy

- respiration
- ruminal fermentations
- waste fermentations

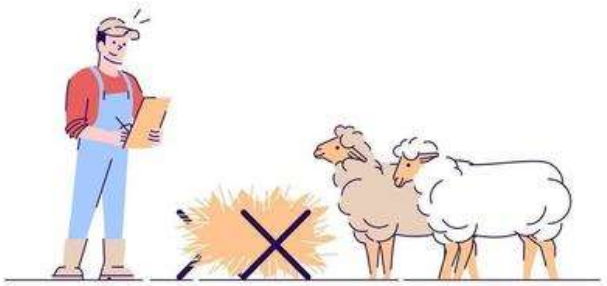
- raw materials
- land operations

- raw materials
- land operations
- trasport

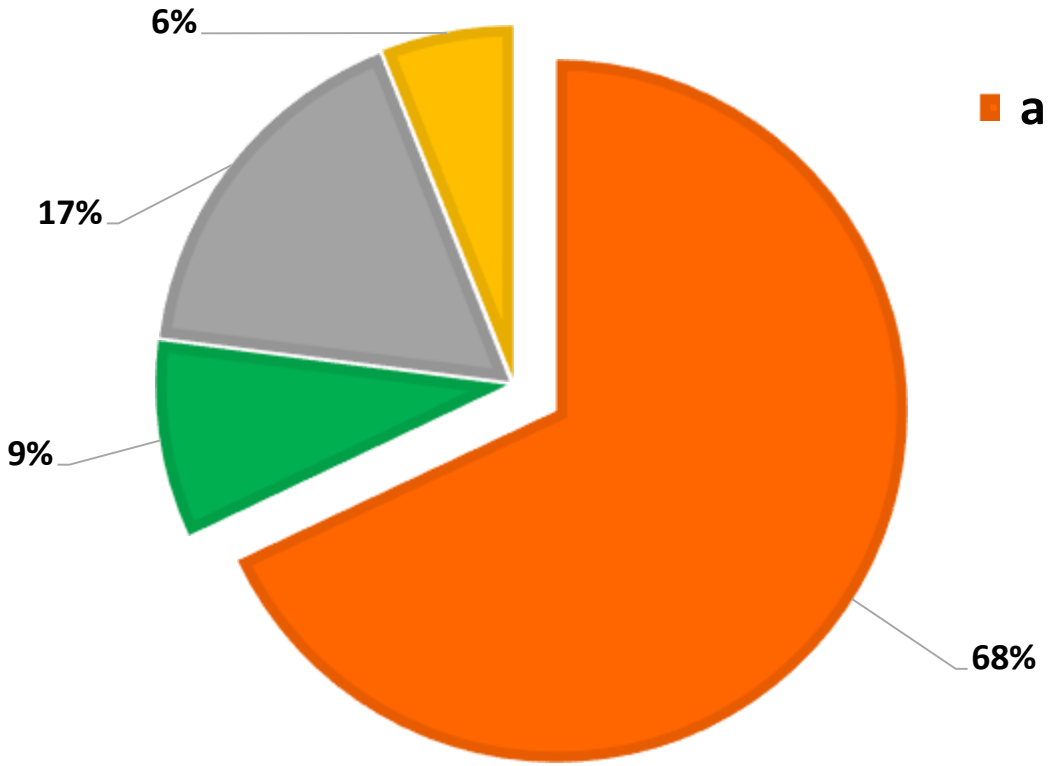
- fuels
- electricity
- others

What can we do?

section 1: animals



- respiration
- ruminal fermentations
- waste fermentations



➢ **Herd management**

- productive parameters
- **reproductive parameters**

➢ **Animal feed management**

- forage/concentrate rate
- additive supplements
- feed quality

CO_2 **- 3% ÷ - 27%**

€ **+ 1% ÷ + 120%**

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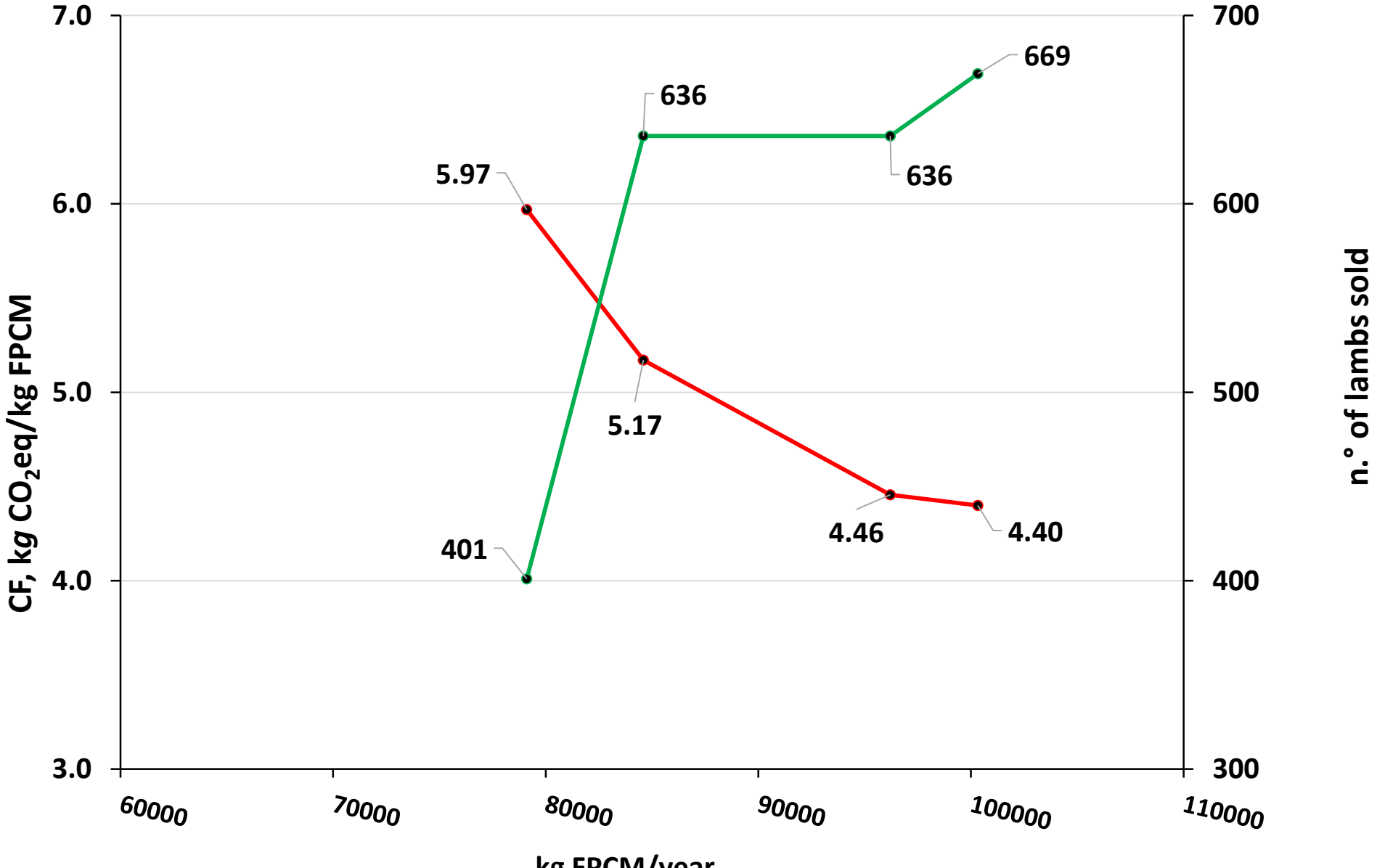
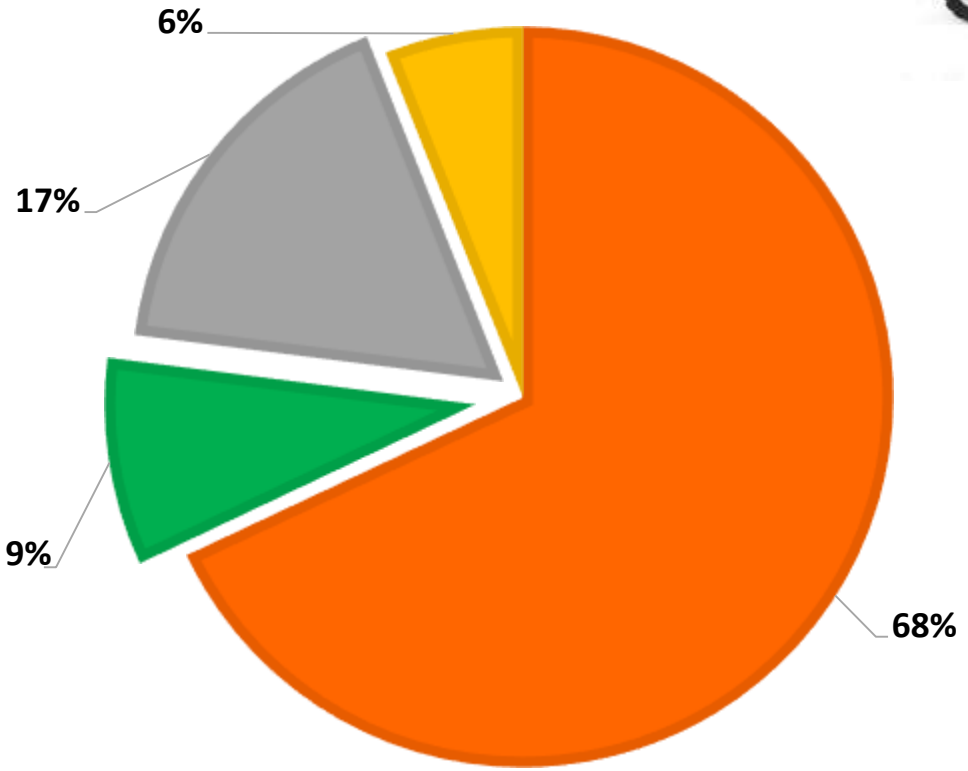
Carbon footprint vs n.°of lambs sold

economic & environmental benefits



What can we do?

section 2: crops & feeds



- raw materials
- land operations

- farm's crops
- purchased feeds

- raw materials
- land operations
- trasport

➢ **Farm's crops**

- **improve self-sufficiency**
- **improve forage and pasture quality**

➢ **Purchased feeds**

- reduction of purchased feeds
- choice of suppliers

- 3% ÷ - 9%

+ 1% ÷ + 28%

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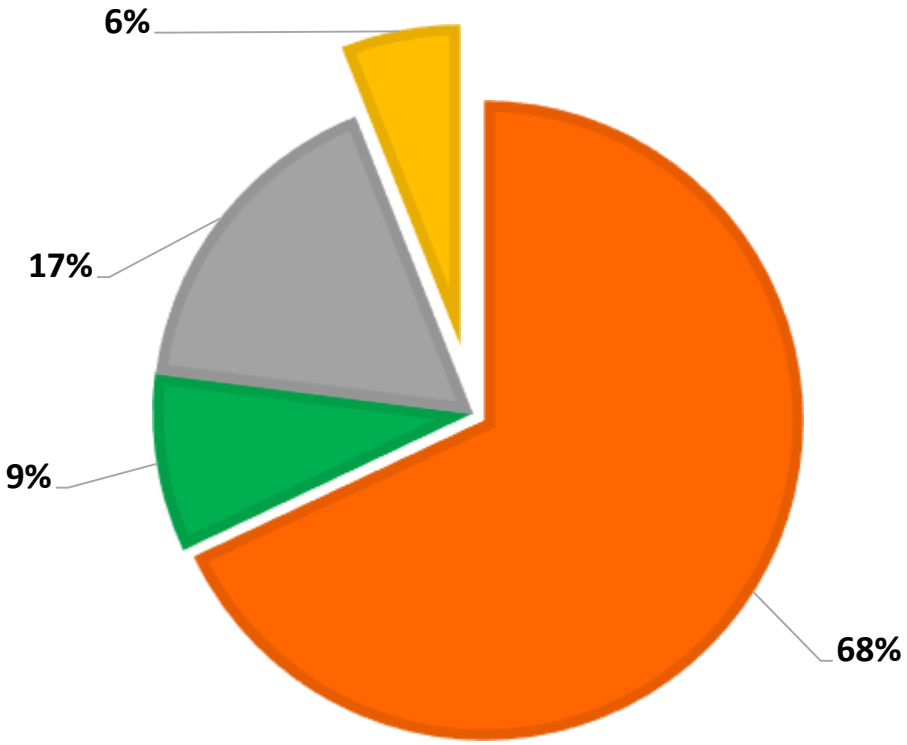
Environmental benefits of sheep grazing

- **Land management**: sheep help in maintaining clean pastures preventing the overgrowth of vegetation
- **Reduction of GHG emissions**: the use of grazing decreases feed purchases and lessens the environmental impact associated with it
- **Sustainable use of resources**: sheep are able to exploit marginal areas and land unsuitable for other crops, transforming otherwise unusable resources into high-quality nourishments

What can we do?

section 3: energy



- fuels
- electricity
- others

➢ **Fuels**

- consuption reduction
- choice of suppliers

➢ **Electricity**

- **self-production**
- choice of suppliers

- 0,5% ÷ - 5%

+ 1% ÷ + 2%

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Conclusions

- Examining a livestock farming business to assess its environmental impact consistently helps us identify the critical points of the production system.

- Environmental issues often reflect or are linked, in most cases, to the economic and managerial aspects of the farm business.

- Addressing these critical points allows us, in a single step, to achieve improvements in the environmental, managerial, and economic performance of the farm business system.

- There is not a perfect solution; therefore, collecting data, comparing it, and conducting simulations and hypotheses helps us to understand more aspects of the problem and enables us to develop increasingly effective solutions.

We **recognize** that we represent a problem for the environment..... but we are the ones

who can be the solution

Thank you for your attention

Laore

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