ANCARES

GRUPO OPERATIVO SUPRAAUTONÓMICO

Innovative tools for land use and soil carbon analysis in sustainable dairy farming agroecosystems

The challenge: Recognising the value of soil in dairy farming

- Reduce greenhouse gas emissions
- Improve the sustainability of the dairy sector
- Maintain the economic viability of dairy farms

The solution: Data, mapping and soil analysis to measure soil carbon levels

- Digital mapping
- Predictive algorithms
- Soil analysis
- Digital tools for carbon management
- Remote sensing

Workflow

UNDERSTANDING THE LANDSCAPE

Farm and land-use mapping, satellite and drone imagery, and soil sampling

ANALYSING THE SOIL

Physical, chemical and biological analyses to assess soil health and soil carbon

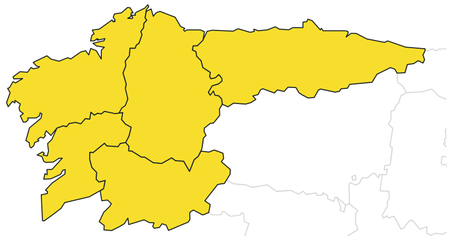
MODELLING AND ESTIMATION

Algorithms and models to estimate carbon stocks and sequestration, optimise fertilisation, and assess different land management scenarios

DEVELOPING DECISION-SUPPORT TOOLS

Digital maps, recommendations and scenario simulations to support more efficient and sustainable farm management

Areas of implementation: Galicia and Asturias



OBJECTIVE

To harness soil knowledge in support of a dairy farming sector that is more sustainable, efficient and closely connected to its local environment.

SUSTAINABILITY

CARBON

DIGITALISATION

RESULTS

- Development of digital mapping and decision-support tools to characterise the territory, manage farms and simulate climate change mitigation strategies
- Assessment of soil health, carbon sequestration capacity and sustainable land management practices in the dairy sector
- Development of recommendations and practical solutions to optimise fertilisation, calculate carbon footprints and improve environmental management

BENEFITS

ENVIRONMENTAL BENEFITS

- Improved soil health and increased carbon sequestration.
- Reduced greenhouse gas emissions and more efficient use of resources.
- Conservation of agricultural ecosystems and biodiversity.

SECTORAL AND STRATEGIC BENEFITS

- Transformation and digitalisation of the dairy sector.
- Generation of reference data for Galicia and Asturias.
- Alignment with climate policies and development of replicable models.

SOCIAL BENEFITS

- Strengthening rural communities and improving the economic viability of dairy farms.
- Supporting employment and economic activity in rural areas.
- Knowledge transfer and greater recognition of sustainable dairy farming.

ECONOMIC BENEFITS

- Increased production efficiency and reduced costs.
- Better decision-making through data-driven tools.
- Access to carbon markets and enhanced competitiveness

Partners and collaborators

Cofinanciado por la Unión Europea

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