

What is SIMBAV?

SIMBAV is a **supra-regional Operational Group** that aims to promote the **modernisation and improvement of the competitiveness of the poultry sector** through a strategy based on the efficient management of its resources.

That strategy focuses on three points:

1. The **recovery of waste generated in poultry farms**, such as chicken and turkey manure, and agricultural waste, such as vine pruning residues, for their **energy use** as biofuels and biofertilizers, allowing the recovery of nutrients after application of the resulting ash to crops.
2. **Control of production processes** through **digitalisation** with the aim of improving animal welfare conditions and the consumption linked to these conditions, in order to implement an **intelligent management system** that facilitates decision-making.
3. **Circular economy actions** to reduce the environmental impact associated with production systems by **reducing energy and water consumption**.

The complete strategy will be evaluated using **Life Cycle Assessment** methodology, to objectively quantify from a technical-economic point of view the environmental performance of the proposed solutions. This will allow us to determine the feasibility of the introduction in the poultry sector of the solution. The innovation pursued by this strategy aims to achieve **innovative and interactive solutions**, focused on the needs of the sector, which **favour decision-making** with the aim of contributing to its positioning in terms of **innovation and economic sustainability**.

What are Supra-regional Operational Groups?

Operational Groups, the main actors in the implementation of the EIP-Agri (European Innovation **Partnership for Agricultural Productivity and Sustainability**), **are one of the key tools within the Strategic Plan of the Common Agricultural Policy (CAP) 2023-2027 to modernise agriculture and rural areas, promoting and sharing knowledge, innovation and digitisation** in agricultural and rural areas. These groups consist of a combination of actors with different profiles but common interests, such as farmers, livestock producers, companies, research centres, training, and outreach institutions, who join together to launch an innovative project aimed at providing a collaborative, multisectoral response to a specific problem or need.



Do you want to know more about SIMBAV?

Please e-mail feuga@feuga.es
or call +34 981 534 180.

More information about the Project is
available on its web page: www.simbav.es



The **SIMBAV** operational group is responsible for this content.



Co-funded by
the European Union



MINISTERIO
DE AGRICULTURA, PESCA
Y ALIMENTACIÓN



Agro-poultry farming symbiosis: towards the modernisation of the sector through digitalisation and circular economy strategies

Total Project budget: 597.650,57 €

Total grant: 595.550,57 €

Innovation project within the framework of the 2023-2027 Common Agricultural Policy (CAP) Strategic Plan, funded 80% by the European Agricultural Fund for Rural Development (EAFRD) of the European Union, and 20% by the Ministry of Agriculture, Fisheries, and Food (MAPA). The Directorate-General for Rural Development, Innovation, and Agri-Food Training (DGDRIFA) is the authority responsible for the administration of these funds.



Co-funded by
the European Union



MINISTERIO
DE AGRICULTURA, PESCA
Y ALIMENTACIÓN

What are the objectives of SIMBAV?

The primary objective of **SIMBAV** is to achieve the **modernisation and improvement of the competitiveness of the poultry sector** through an **efficient resource management strategy, the improvement of animal welfare**, and the achievement of an **energetic symbiosis** between biowaste of poultry origin and other crop waste from neighbouring farms. Specifically, to:

- **Improve animal welfare** by adopting an **intelligent management system**.
- Achieve **energy recovery** from poultry and turkey manure and crop waste through optimized thermochemical recovery processes.
- **Reduce the environmental impact** associated with the farm's activity by minimising consumption.
- Define the **nutrient supply capacity of ashes**, their **capacity to replace inorganic fertilisers** and the formulation of **liquid fertilisers** prepared from ashes.

What results are expected from SIMBAV?

The expected outcomes of the SIMBAV project are as follows:

- **Reduction of the mortality rate** of birds by optimizing existing energy consumption.
- **Recovery of thermal energy** from biofuels by optimizing the combustion system and the gasification process for use in the poultry sector.
- **Reduction of the farm's mains water consumption** and evaluation of the percentage of **savings in overall energy** costs with the solution proposed in the project.
- **Reduction in the use of inorganic fertilisers** to be applied to specific crops.
- Determination of the **environmental profile and technical-economic feasibility** of the implementation of the digitalisation and circular economy actions.

SIMBAV activities



1 Development of the intelligent management system and digitalisation of the farm.



2 Energy use through drying, combustion and gasification of waste.



3 Reduction of water consumption and quantification of the farm's energy savings.



4 Use of by-products to reduce the use of inorganic fertilisers.



5 Life Cycle Analysis of the efficient management strategy developed.



6 Dissemination and transfer of results throughout the project.

Who are the target groups?

The **SIMBAV** project directs its results to all stakeholders in the agro-poultry sector:

-  Farms and cooperatives in the poultry sector.
-  Companies related to the energy sector.
-  Other farmers, cooperatives and agricultural holdings.
-  Technology centres, research institutes and universities.
-  Technological platforms..
-  Public administrations related to livestock farming, the environment and/or rural development.
-  Final consumers and the general public.

To maximize the impact of the results and facilitate the transfer of the solutions developed in the **SIMBAV** project, an intensive outreach effort will be carried out at the regional, national and European levels (including articles, outreach events, workshops, website content, etc.).

Who are the members?

Beneficiaries: The supra-regional Operational Group SIMBAV, encompassing the Autonomous Communities of **Galicia, Castilla y León and Murcia**, is coordinated by the Fundación Empresa-Universidad Gallega (FEUGA), and includes the participation of the Centro Tecnológico EnergyLab, the companies Demaux Manufacture S.L., Granja José Antonio García, Avícola El Charcón S.L. and Bodega Hermanos del Villar (Oro de Castilla), the Asociación Castellano-Leonesa de Empresas de Avicultura (ASCLEA) and the Consejo Superior de Investigaciones Científicas through the Centro de Edafología y Biología Aplicada del Segura (CEBAS-CSIC).

The University of Vigo (UVigo), through the Energy Technology Group (GTE), acts as a **subcontracted member**.

