



Sustainable Management of Agricultural Livestock Surpluses: The Living Lab Approach

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Background

Livestock effluents currently represent a surplus in livestock production and their management has significant impacts on animal production systems, particularly in terms of technical operational decisions, profitability, and technical-economic viability.

Although these effluents hold considerable potential for valorization, their use without proper treatment has a strong environmental impact, affecting atmospheric emissions and soil contamination.

About LIVING LAB

The LIVING LAB - Agricultural Livestock Effluents and By-products Project was created to promote integrated solutions for treating agricultural livestock effluents and recovering biogas for energy production.

This project aims to **valorize resources**, addressing various interests converging in the production and proper integrated management of effluents and by-products in agricultural activities, ensuring sustainable development at regional and national levels.

Pilot Experimentation/Demonstration Units will be developed to **transfer knowledge** in the agricultural sector, through applied research and the provision of specialized technical services in a multi-actor environment.

The Pilot Units will work in a top-down logic, according to a 'Living Lab' (LL) model, as dynamic initiatives, adapted to local, regional or national needs.



Develop new, innovative products, processes and services with added value in a holistic approach.

Project Organization

A1. Treatment:

Application and/or development of processes;

A2. Value:

Evaluation of products/biomasses resulting from different processes;

A3. Monitorization/Automation:

Monitorization/Automation of processes and products, transversal to the entire Project;

A4. Dissemination and Training:

Implementation of a 'Living Lab' with Pilots of Experimental Development and Demonstration for valorization of effluents or co-products of agricultural activity, in a scale up approach with a diversity of partnerships.

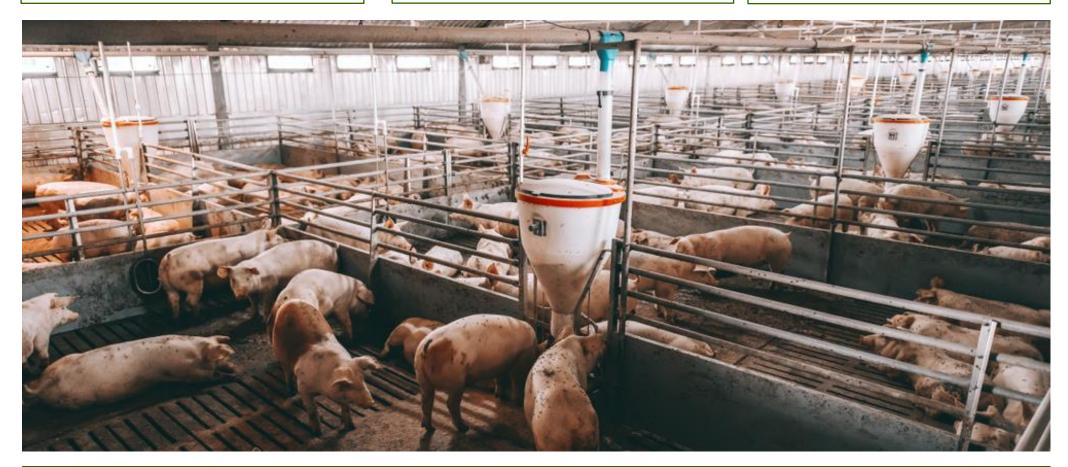
This LL Pole will consolidate the implementation of technological solutions for valorization on a semi-industrial scale, to assess the impact of emerging solutions on the different processes to be developed and at different levels: valorization, reduction of GHG and NH3 emissions, circularity of processes and the respective products.



Outcomes

The expected outcomes include demonstrating the scaling-up valorization of agricultural effluents and by-products, contributing to circular agriculture and nutrient cycling.

The LIVING LAB will play a crucial role in promoting sustainable processes and products at various levels, ensuring resource protection and reduced environmental impact.



Partnership

Responsible Institution:

INIAV - Instituto Nacional de Investigação Agrária e Veterinária, I.P.

Partners:

- Cropstore, Lda.
- Farm Control, SA.
- IACA Associação Portuguesa dos Industriais de Alimentos Compostos para Animais
- IMFlorestal, SA.

- IngredientOdyssey, SA.
- Instituto Superior de Agronomia
- Leal e Soares, SA.
- Tterra Engenharia e Ambiente, Lda.
- Universidade de Évora
- Universidade de Trás-Os-Montes







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