



COUNTRY

Portugal, Mainland

PROJECT PROMOTER

ADDLAP - Local Association for Rural Development of Dão, Lafões and Alto Paiva

PROJECT PARTNERS

Instituto Politécnico de Viseu
Universidade de Aveiro

ANCOSE – Associação Nacional de Criadores de Ovinos da Serra da Estrela

Ervital - Plantas Aromáticas e Medicinais, Lda

Indumape – Industrialização de Fruta, S.A.

Ovargado, S.A.

Vasco Pinto & Agostinho Sousa, Lda – Agricultura Biológica

Silvex - Indústria de Plásticos e Papéis, S.A.

FUNDING

RDP 2014-2020, EUR 313 850

RDP MEASURE

M16 – Cooperation (EIP-AGRI)

DURATION

2017 – 2020

CONTRIBUTION TO

- generating environmental benefits
- mitigating climate change

KEYWORDS

Added value, agriculture, bio-based waste, residues, by-products, cooperation, EIP-AGRI

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Waste2Value - Reusing agricultural by-products for animal feed, biodegradable plastics and the treatment of animal effluents

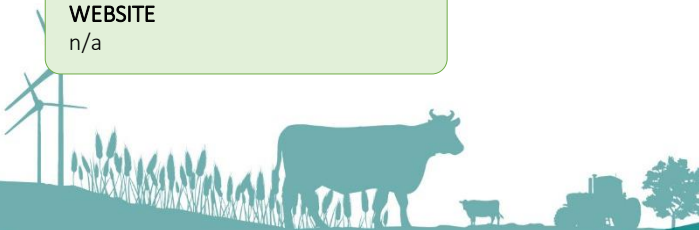
The initiative

This EIP-AGRI project comprises several strands of work, including using agricultural by-products to obtain ingredients for animal feed; reducing/eliminating the use of antibiotics in animal feed; creating biopolymeric materials for agricultural bio-degradable plastic films.

The sorts of activities carried out by the project team include conducting surveys on by-products produced in the Central Region of Portugal; identifying relevant good practices; studying by-products' properties; introducing nutrients from by-products into animal feed and evaluating the effectiveness of the process; creating biodegradable plastics to be used in agriculture; and compiling a portfolio of applications and methodologies to assess the economic value of by-products.

RESULTS

- ✓ The project seeks to contribute to minimising the impact of by-products and agro-industrial effluents on soil and water.
- ✓ Two individuals directly employed in/by the initiative.



Context

The project came about in response to the need to reduce antibiotics in animal feed and to develop strategies for handling by-products from the agricultural sector in Portugal.

Objectives

Overall, the project 'Waste2Value' aims to develop alternative processes and new products that address both of these problems, through the creation of added value and through the reuse or repurposing of existing resources.

Specific objectives are to use agricultural by-products in order to:

- Obtain value-added compounds and use them as ingredients in animal feed;
- Reduce/eliminate antibiotics in animal feed;
- Create biopolymeric materials for agricultural biodegradable plastic films;
- Obtain carbonaceous materials for treating animal effluents.

Activities

Activities carried out by the project include:

- Conducting a survey on the types and quantities of agricultural and agro-industry by-products produced in the Central Region of Portugal, and identifying relevant good practices;
- Evaluating the perishability and stability of by-products' and classifying them according to their properties;
- Implementing a process of separating by-products in order to characterize their nutrients profile and the composition of molecular components of interest;
- Introducing the nutrients from by-products into animal feed and evaluating the effectiveness of the process;
- Creating biodegradable plastics from fibres that can be used in agriculture and preparing other materials for treating animal effluents;
- Creating a portfolio of applications and methodologies to assess the economic value of by-products.

Environmental sustainability

The project will help mitigate the environmental impact of agro-industrial by-products on soils and water, and will develop solutions to replace polymers of fossil origin with biopolymers.

In territorial terms, the project focuses on an agricultural area with significant problems. The project will support the area by creating added value through the use of by-products for new applications; sharing technical, scientific know-how and good practices among researchers, farmers and the industry.

The members of the consortium are currently involved in preparing the regional circular economy agenda for the Central Region of Portugal.

The project is connected to another operational group in Portugal (SubProMais), whose aim is to improve the productive capacity of animals and plants. It is also linked to the project GERValor that fosters the circular economy through the development of a business model for the valorisation of organic food waste.

Lessons learnt & recommendations

Within one year of launching the project and being in contact with producers, the project team realised that there was a need for greater awareness in the agri-food production sector of circular economy issues, namely the impact of by-products and effluents on the environment and the possibility of deriving more value from them.

The team identified the need to involve local authorities, and did so, although they are not direct partners in the Waste2Value operational group.

The operational group needs to include both producers of by-products and effluents, and those who can use the end-products.

It is important to know the quantities of by-products and effluents produced in an area.

Raising awareness about the circular economy is essential, as is the creation of networks that bring together local public authorities, researchers, farmers, development associations, and associations of farmers and the agro-industry.