



Co-financed by Greece and the European Union

Development of intelligent traceability applications, decentralized supply chain networks and efficient technologies for the safe and sustainable integration of food by-products into pig feed

The Problem

Pig farming is an important sector of primary production in Greece, which faces significant economic problems. Since feed costs are about 60-70% of the total production cost, new practices are needed to reduce it. The use of food by-products as animal feed is a widespread traditional practice, but the use of inappropriate and unsafe food by-products in the pig feed is a critical pathway for spreading diseases. For the above reasons, it becomes apparent that the uncontrolled use of food byproducts in the pig feed is extremely risky.

The Project

The CPigFeed project aims to develop all the necessary tools and methodologies to overcome barriers (technical, economic and social) that prevent the use of food by-products in the pig feed mixture, and thus to promote the principles of the Circular Economy in the production of animal feed.

The Approach

CPigFeed Overall Objective

- intelligent traceability : development of The applications and innovative software tools that facilitate track and control of the supply chain, enabling the safe integration of food by-products into the pig feed;
- The use of tracking procedures throughout the food chain which will allow the food by-products to be exploited through better management of the available information;

To achieve its objectives, CPigFeed develops intelligent information tools and traceability applications, and demonstrate them on a decentralized supply chain of food by-products that is set up in a typical Greek pig farm. Food by-products are incorporated in the pig feed mixture, after setting-up a protocol for the safe incorporation of food byproducts, and after assessing the impact of the new feed mixture on the health and welfare of pigs, as well as the yield and quality of the final product (pork).



Since the safe incorporation of food by-products into pig feeds is of great importance, the CPigFeed project adopts international standards and tracking procedures throughout food chain to facilitate control of the supply chain and achieve efficient traceability of foodstuffs. In further detail, the main focus of the fullpath tracing traceability system will be to effectively support this implementation following a 4-stages is process:

Identification: By following GS1 Standards, it will begin with GS1 Identification Numbers used to] uniquely distinguish all food products, logistic units, locations, assets, and relationships across the supply chain from producer to consumer

The adoption of international standards in order to ensure the proper and efficient traceability of foodstuffs

Expected Impacts

- **Exploitation of food by-products currently disposed** as solid waste;
- using Minimization the health risks of of inappropriate and unsafe food by-products;
- Reduction of the cost of animal feed, as well as dependence on imported raw materials;
- Introduction and utilization of information tools and inventory tracking, intelligent collection and management applications;
- Promotion of the principles of Circular Economy in the in the production of animal feed.

- Capturing: GS1 System Data Carriers will be used for holding varying amounts of data to accommodate different supply chain process needs for different products
- Evaluating: The captured information may be evaluated against targets that will have been set. A blind benchmarking approach could be also considered by using the proposed traceability system
- Sharing: The interoperability of the application which will be developed, will facilitate the seamless is exchange of information during commerce transactions



CPigFeed project traceability system

The Project Partners









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