

Slovenia

Farm's performance, restructuring & modernisation

Location

Ljubljana

Programming period

2014 – 2020

Priority

P2 - Competitiveness

Measure

M16 - Cooperation

Funding

Total budget 369 125.60 (EUR)

EAFRD 262 023.50 (EUR)

National/Regional 65 505.87 (EUR)

Private 41 596.23 (EUR)

Project duration

2019 – 2022

Project promoter

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An EIP-AGRI Operational Group aimed to improve the traceability and marketing of organic beef in the Slovenian food supply chain through a blockchain-based system.

Summary

As no effective system of traceability and marketing of organic beef had been established in Slovenia, a significant part of the organically produced beef was being processed and sold as conventional meat. By introducing new decentralised digital technologies into the organic food supply chain, the project aimed to create an effective traceability system that ensured greater data integrity and transparency of the entire supply chain from farm to fork in the organic beef sector.



EIP-EKOPAKT

Project Results

Agricultural holdings that use this model will be able to sell their meat in the chain as organic, for which they will receive a better payment.

The system will create new opportunities for the development of business models based on the production and sale of organic meat and thus better conditions for marketing.

The project will contribute to greater capacity of agricultural holdings and consultants to capitalise on the digitalisation of agriculture. The data collected will be used by the Slovenian Agricultural Advisory Service.

Lessons & Recommendations

- Traceability in the food supply chain through the use of digital tools, such as blockchain technology, is an innovative approach that can be applied to other agricultural sectors.

Context

In Slovenia, there was no effective system in place for the traceability and marketing of organic beef. This meant that a considerable proportion of the organically produced beef was treated as conventional meat in the food supply chain. In addition, consumers often find it difficult to distinguish between different quality schemes, or they do not trust them enough to allow them to influence their buying habits. The marketing of organic meat has therefore mostly been left to individual farmers and cooperatives that pay more attention to it. With the help of the traceability system developed by the EIP-AGRI Operational Group EKOPAKT, breeders and meat processors will be able to better position their organic products in the market and develop innovative marketing approaches and business models that can capitalise on the system.

Objectives

The EIP-AGRI Operational Group EKOPAKT aimed to develop a system for improving the traceability of organic beef throughout the food supply chain as well as the production of organic beef by collecting a broad range of data on the sustainable use of natural resources in organic beef production.

Activities

The system will connect various stakeholders, from cattle breeders (six organic cattle breeders as members of the EKOPAKT project) to intermediaries and meat processors (agricultural cooperatives, specifically the Šaleška Dolina, Rače and Laško cooperatives), as well as state databases and open data platforms, etc. It will also be possible to include additional stakeholders in the future, such as certification organisations and supervisory authorities, for example. The project was developed in cooperation with the Agricultural Advisory Service of the Agricultural and Forestry Chamber of Celje and the Faculty of Agriculture and Life Sciences of the University of Maribor.

The system is based on a blockchain approach. Agricultural holdings contribute data concerning the rearing of their animals plus indicators of the sustainable use of natural resources that are typical of organic farming. The system compares the data between stakeholders in the system and based on this, it validates the accuracy of the data. The project also provides training to the agricultural holdings that are using the system. Activities conducted as part of the project involved:

Data mapping, identifying and classifying key data on product traceability.

Organised visits to participating agricultural cooperatives to review the production processes at the actual production locations. The Operational Group also obtained data on internal labels that are used to label meat as part of the production process.

Collected data from agricultural holdings related to the sustainable use of natural resources. The Operational Group set biodiversity indicators on each farm, which were used to establish an index for sustainable use of natural resources. Agricultural advisers will use this index to make recommendations to the different agricultural holdings.

Formulated a digital traceability model incorporating data from stakeholders throughout the food supply chain.

Collected user and technical documentation that will serve to create a website and a web application for product traceability.

Designed a website to host an educational platform in addition to the web application for product traceability.

Created a web application for product traceability through which consumers and professionals may obtain more information about the desired product.

Main Results

The expected results from the traceability system developed by EKOPAKT include:

- agricultural holdings that use this model will be able to sell their meat in the food chain as organic, for which they will receive a better payment.
- new opportunities for the development of business models based on the production and sale of organic meat and thus better conditions for marketing.
- greater capacity of agricultural holdings and consultants with regard to the digitalisation of agriculture. The data collected will be used by the Slovenian Agricultural Advisory Service.
- greater transparency in the supply chain for organic beef in Slovenia.
- increased consumer trust in organic product marketing systems.
- transferability of the system to other segments of agricultural production.
- new jobs created in the sector. The project itself has generated two jobs around the use of digital tools (Origin Trail).

In addition, the system is already being used in the Šaleška Dolina agricultural cooperative, which is a member of the Operational Group. Preliminary results show an increased demand for organic beef by approximately 30%.

Key lessons

The key for the project results to be sustainable is knowledge transfer between stakeholders, project partners and other interested parties who are not involved in the project.

Strong cooperation within the supply chain, along with consistent and innovative communication about food's origins, brings significant positive effects for all stakeholders in the food supply chain. These include the optimisation of processes throughout the supply chain as well as the competitive advantage of organic beef products in the market.

Traceability in the food supply chain through the use of digital tools, such as blockchain technology, is an innovative approach that can be applied to other agricultural sectors.