Development of new organic cultivation technology for the production of soya beans in Latvia

A research project to develop cultivation techniques for organic soya beans, or 'edamame', in Latvia.

EAFRD-funded projects

Country: Latvia
Location: Lielvārde, Kandava and Ķekavas municipalities
Programming period: 2014-2020
RDP Priority: P1. Knowledge transfer and innovation
Focus Area: Innovation and cooperation
Measures: M16. Cooperation
Funding:

Total budget	97 661 (EUR)
EAFRD	46 487 (EUR)
National/regional	21 876 (EUR)
Private/own	29 298 (EUR)

Timeframe: 03.2018 - 02.2021
Project promoter: Dārzkopības institūts/Institute of Horticulture
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Summary

The Latvian Institute of Horticulture implemented a research project in cooperation with three farms, setting out to test and optimise the cultivation techniques of organic soya beans (Glycine max (L.)) or 'edamame'. This involved a series of practical trials, exploring different sowing/planting and other techniques on the production and processing of the product.

Project results

- Thanks to the project, edamame cultivation technology has been developed and adapted for the agro-climatic conditions of Latvia.
- The project developed guidelines for farmers on how to grow edamame and the project results have been widely shared across a variety of media.

Lessons & Recommendations

- The Common Agricultural Policy (CAP) can fund very useful applied research to identify new crop options promoting farm diversification, economic development, import reduction, plant-based proteins, organic production systems and more.
- Cooperation between researchers and farmers is fundamental for developing new production technologies in agriculture.
- Successful public awareness raising about project implementation and research results relies upon the use of clear and non-technical language.

Context

In Latvia there was no comprehensive information available on how to grow organic soya beans (Glycine max (L.)) or 'edamame'. As soya beans are not so well known in Europe, there are still many questions regarding its production, such as what the optimal seeding density is or when the ideal sowing or planting times are; whether the plants are better produced by sowing directly on the field or planting from seedlings; what plant protection problems can appear when growing on a larger area, etc.

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In addition to this, edamame seeds are not easily available for purchase in Europe, so there was also a need to explore the possibilities of local seed production. To address these issues, the Latvian Institute of Horticulture launched a pilot project, in cooperation with a group of farmers, to investigate the production potential of this new product in Latvia.

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Objectives

The main aim of this project was to develop a new organic cultivation system for edamame; checking the suitability of different vegetable soybean varieties under specific conditions.

Activities

The project was implemented by the Institute of Horticulture, as lead partner, in a cooperation with three farms – Puteņi in the municipality of Lielvārde, Mežzīles in the municipality of Kandava and Atvases in the municipality of Ķekavas. The project activities included:

- Conducting field trials and optimisation studies on the most important agrotechnological factors for the cultivation of vegetable soy in Latvia, including sowing/planting technology (flat field or furrows), plant density and maintenance work, as well as research into the most efficient harvesting technologies. Here, the team conducted trials in different agro-climatic conditions (in the Lielvārde, Kandava, Tukums and Ķekava districts).
- Investigating the possibilities of using edamame seeds for the production of local seed material.
- Determining the nutritional value of edamame and developing pre-treatment technologies to extend the period of use.
- Performing data collection and analysis, preparing publications and practitioner toolkits, presenting results at conferences.

Main results

- As a result of the implementation of the project, edamame cultivation technology was developed for the agro-climatic conditions of Latvia and information was compiled and disseminated concerning its nutritional value and storage time extension options.
- The project developed and shared guidelines for farmers on how to grow edamame. The project results were published in international scientific journals (Journal of Food Science and Technology, Biological Agriculture & Horticulture, etc.) and were also presented at various scientific conferences, exhibitions and public events. An interview was given on national TV and open day events were organised at two of the project trial farms.

Key lessons

- The CAP can fund very useful applied research to identify new crop options promoting farm diversification, economic development, import reduction, plant-based proteins, organic production systems and more.
- Cooperation between researchers and farmers is fundamental for developing new production technologies in agriculture.
- The dissemination of information about a project's implementation and research results should be adapted to the media in question. For public awareness raising, the use of clear and non-technical language ensures broader reach.

Additional information:

www.darzkopibasinstituts.lv

www.laukutikls.lv/sites/laukutikls.lv/files/raksti/gala_atskaite_edamame.pdf

Funded by the European Union