

LATVIA

Farm's performance, restructuring & modernisation

Location

Priekulji

Programming period

2014 – 2020

Priority

P2 – Competitiveness

Measure

M16 – Cooperation

Funding

Total budget 98 907.30
(EUR)

EAFRD 59 136.38 (EUR)

National/Regional 27 828.88
(EUR)

Private 11 942.04 (EUR)

Project duration

2018 to 2020

Project promoter

Institute of Agricultural
Resources and Economics

Email

Arta.Kronberga71@gmail.com

Website

<https://www.arei.lv/lv/projekti/2018/partikas-kanepju-audzesanas-pirmapstrades-tehnologiju-izstrade-un-produkcijas>

A cooperation project to develop the technology for growing and processing organic hemp seeds.

Summary

A research institute in cooperation with three farms studied the suitability of various local hemp plants for organic farming, including the unique Latvian genetic resource conservation varieties 'Adzelvieši' and 'Pūriņi'. The project then developed and tested cultivation and processing technologies that would maximise seed quality and yield.



© Project publicity material

Project Results

- Technologies for farming, pre-treatment, storage, dehulling and oil pressing of organic hemp seed have been successfully developed.
- The technical results have been widely disseminated.

Lessons & Recommendations

- ❑ Successful partnership projects rely upon strong collective motivation, mutually agreed terms of reference and a delivery framework that plays to the strengths of each partner and benefits all partners.

Context

Demand for new, healthy niche food products is growing steadily around the world. In this context, hemp seeds are an ideal food product because of their very high nutritional value. It is possible to grow high quality, organic hemp seeds in Latvia, and there is strong interest for these products on the European market.

Successfully promoting the farming of local varieties of hemp relies upon a shared understanding of how to grow, store and process them in Latvian agro-climatic conditions. Researchers at the Latvian Institute of Agricultural Resources and Economics in partnership with 'Spelta' Ltd., 'Transhemp' Ltd. and the 'Lojas' farm identified a research gap in this area, especially concerning technology used in growing and pre-processing. This project aimed to address that gap.

Objectives

To develop innovative and sustainable cultivation and pre-processing technologies for organic food hemp farming.

Activities

Initial trials 2018-2020 assessed which local varieties of Latvian hemp were most suitable for organic farming. The results showed that 'Adzelvieši' and 'Pūriņi' were equivalent in yield and quality to - and in some cases even outperformed - commercial varieties.

Development of technologies for the pre-treatment and storage: New pre-treatment technology, which aimed to improve the microbiological quality of the hemp seeds, was tested and the ozonation of hemp seeds was carried out on crop samples at the end of 2018 and 2020.

Development of processing technologies for dehulling and oil pressing: the suitability of different hemp varieties for oil pressing was assessed; along with characteristics such as oil yield, hemp seed cake yield and the organoleptic characteristics of the oil.

The process for extracting oil from hemp seeds was improved by cold pressing and developing innovative technologies.

Knowledge transfer: The project prepared an electronic booklet called 'Recommendations for growing hemp in organic farming for seed production'. The results of the project were showcased at one of Latvia's major agricultural events: Field Days (2018, 2019 and 2020), and were also quite widely presented via student papers, knowledge sharing events and through media coverage.

On 5 February 2021, in cooperation with the Latvian Rural Advisory and Training Centre, an online Conference 'Hemp for Seed - Cultivation, Processing and Application' was organised and reached at least 600 people.

Main Results

- Organic farming technologies for edible hemp have been developed and tested - the most suitable varieties have been recommended and their cultivation processes described.
- Pre-treatment and storage technologies have been developed and tested, allowing a reduction in the loss of essential quality characteristics. The results showed that the microbiological characteristics of hemp seeds are strongly influenced by weather conditions and that it is therefore particularly important to harvest hemp at the right time, to pre-clean and dry it immediately, and to monitor the microbiological characteristics of the seeds harvested from each field.
- Hemp seed dehulling and oil pressing technologies have been developed and tested.
- The technical results have been widely disseminated.

Key lessons

Successful partnership projects with partners of different organisational types rely upon strong collective motivation and need to have mutually-agreed terms of reference.

It was important that design of the research of the project took the strengths and interests of each partner into account to create a solution which would benefit all partners.

“The project has been very important for the growth of each partner. It has helped us to come to conclusions more quickly than we would otherwise have come to over a longer period of time.”

Iveta Pāvula, owner of ‘Spelta’ Ltd, project partner

Additional sources of information

<https://www.arei.lv/sites/arei/files/files/projects/Projekta%20atskaite%2017-00-A01620-000023.pdf>

<https://www.arei.lv/lv/raksts/2021-07-06/buklets-ieteikumi-kanepju-audzesanai-biologiskaja-lauksaimnieciba-seklu-ieguvei>

<https://www.arei.lv/lv/raksts/2021-01-28/konference-kanepes-seklai-audzesana-parstrade-un-pielietojums>