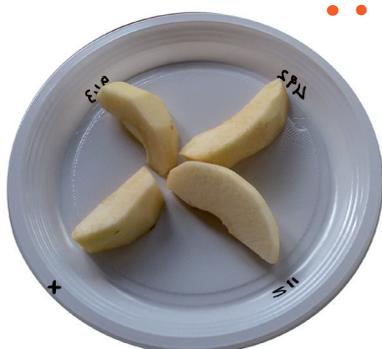




Study dealing with the quality traits of organic agricultural products

FAVORDENONDE



Aim of the project:

Exploring the presence and levels of desired and undesired compounds in raw and processed fruit and vegetables

Introduction

In organic fruit and vegetables, the aim is to establish and evaluate the presence of both positive and negative substances together with a suitable protocol of processing for the derived products.

What: give a contribution in the knowledge about quality descriptors in fruit and vegetables from organic agriculture.

Why: the need of studying possible changes in quality traits for organic-derived fruit and vegetables and processed products.

Where: fruit and vegetables from Italy, Estonia, Denmark and Norway; juice processing in Estonia, drying and jam processing in Italy.

Background

The cultivation of organic fruits and vegetables has recently stood out the aspect related to the quality of the products deriving from the processing chain. A special attention has to be devoted to the local varieties well adapted to a determined territory, and to simple and small processing plants. The scientific research will try to shed light on the popular thought “An home-made food processing, made in small quantities and with high quality raw material, ensures a better sensory and nutritional quality of the processed food product than “industrially” processed food”.

Main activities

- ▶ Cultivation of conventional and organic fruit and vegetables (mostly apples, strawberries, plums, tomatoes and sweet pepper);
- ▶ Processing of products by making jams, juices and dried products;
- ▶ Studies made by sensory analyses;
- ▶ Studies on antioxidants and new tastants content;
- ▶ Analyses of allergen content;
- ▶ Analyses of patulin, a mycotoxin content.

Vegetables (sweet red peppers) ready for analysis in the laboratory.
Photo by CRA-IAA.



Expected societal benefits of the project

The results from the present project will especially benefit primary organic producers and small-medium sized organic, local processing companies, since created knowledge will be the basis for added value for their agriculture-derived products. The results will also contribute to the awareness of organic consumers if the consumption of organic fruits and vegetables is related to an improved acceptance and taste of these products with respect to other conventional or industrial processed products.

Expected results and impacts

In general, FaVOR-DeNonDe will contribute significantly to new knowledge about the balance between desired and non-desired components in selected fruits and vegetables as well as how different processing techniques appropriate in organic production affect specific quality traits of fruits and vegetables. Specifically, the impact of organic and innovative processing techniques will influence:

- 1- the sensory properties and the acceptance of the products;
- 2- the presence of antioxidant compounds;
- 3- the presence of allergens;
- 4- the presence of mycotoxins.

Expected long-term impacts

In this framework, the objective is to ensure the socio-economic growth of local communities by their involvement in activities and projects regarding the sustainability in agriculture, also possibly acting at a trans-national level.



Apple experiment in Estonia.

Photo by EMU.



Researchers at work with a small-scale plant for producing high-quality processed products (fruit and vegetables jams and purees).

Photo by CRA-ORA.



Breeding selection in an organic field.

Photo by CRA-ORA.



How to reach target groups

Differentiated types of involvement will be attempted, for example regarding non-profit associations of rural development, or specialized web sites. These entities will ensure a dissemination activity for the small enterprises working on organic, local and high quality agricultural products.

Example of apple slices ready for sensory test.

Photo by CRA-IAA.

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Example of dried sweet red pepper ready for consumption or sensory tests.

Photo by CRA-IAA.

Further information

This project is funded via the ERA-net CORE Organic Plus, which is a network of 20 countries on initiating transnational research projects in the area of organic food and farming systems. In 2014, CORE Organic Plus selected FaVOR-DeNonDe and 10 other projects.

Read more at the CORE Organic website:

<http://www.coreorganic.org/>

and find publications from the project at:

<http://coreorganicplus.org/research-projects/favor-denonde/>

and at: <http://orgprints.org/view/projects/favordenonde.html>