



Organic food authentication

– Fast methods for authentication of organic plant based foods

AuthenticFood



Aim of the project:

To be able to discriminate between organic and non-organic plant-based foodstuffs



Introduction

In AuthenticFood a portfolio of the most promising analytical methods, markers and concepts will be tested for their ability to authenticate organic plant products. The aims are to provide the tools that will ultimately give confidence to consumers by revealing fraudulent substitution of organic with conventionally cultivated products and consequently to promote organic food through assured authenticity.

The market shares for organic products have continuously grown over the last decade even though organic products are being sold at premium prices compared to conventional ones. However, recently there have been a growing number of reported cases, where conventional food products were mislabelled and fraudulently sold as organic. Consequently, there is an urgent need for development and validation of analytical methods, which allow discrimination between organic and conventional food products.

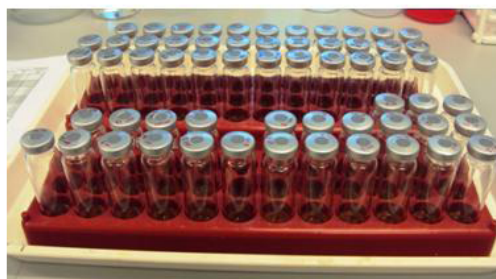
Background

There is an ever-increasing consumer demand for foods of local origin or food cultivated by organic farming practices. However, the organic sector is becoming increasingly dominated by corporate players that may not share some of the less tangible benefits of the organic philosophy. This places an increased burden on certification/inspection bodies and traceability systems on which the authenticity of the organic produce depends. Thus, to assure the authenticity of foods marketed and labelled as “organic”, there is a need for robust, accurate and validated analytical control methods.

Benefits of the project

The analytical methods developed in AuthenticFood will be tested on plant samples from rigorously controlled long-term field trials as well as on unprocessed and processed samples from organic and conventional farmers. This will minimize the gap between science and “real life” and thereby ensure a rapid application of the developed methods. The organic sector in general can therefore benefit from this within a short time scale. Consumers are ensured that products labelled as organic have been produced according to the labelling claims while certification and control bodies are given new tools for revealing fraud and mistakes. Trustworthiness of organic produce is thereby retained which will strongly support the sustainability of the organic sector in EU.





Expected results

It is expected that AuthenticFood will deliver valuable inputs to the scientific community regarding development of novel analytical techniques. Due to the involvement of 16 partners from 11 European countries, the project offers a unique possibility to exchange scientists amongst research groups and thereby update and improve their individual analytical skills. AuthenticFood will presumably attract BSc and MSc students and thereby have an educational impact. As organic food production is of great interest to the public, AuthenticFood will inevitably have a policy oriented impact as well.

Expected long-term impacts

Ultimately, AuthenticFood will provide novel analytical tools for authentication of organic plant products and will thereby ensure that the trustworthiness of organic produce is retained and that the organic sector will continuously grow despite recent cases of fraud.

Target groups

Target groups of the research conducted in AuthenticFood encompasses farmers, certifiers, manufacturers, retailers, consumers, scientists, politicians etc. As organic products are increasingly imported from non-European countries, target groups are found worldwide. Consequently, the research from AuthenticFood is also expected to have an impact on large non-European organic markets such as the United States of America.

Main activities

In AuthenticFood, novel analytical techniques for organic authentication will be developed and tested. These are based on a suite of the most promising analytical methods such as multi-elemental analysis, stable isotope analysis, metabolomics and pesticide screening. Methods will be developed in close collaboration between different European research groups representing a wide range of analytical expertises. Results will be explored using multivariate statistics to find markers or multivariate fingerprints that are unique for organic plants and plant products. Finally, a major task of AuthenticFood is dissemination of results to consumers, local producers, manufacturers, retailer, politicians etc. as well as publication in peer-reviewed journals.

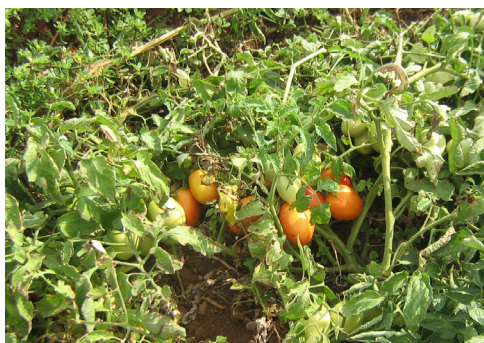


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Related projects

OrgTrace: Organic food and health, DARCOF III project. Conducted in Denmark 2007-2010.

Project dissemination

A strong focus will be on popular science dissemination to consumers, local producers, manufacturers and retailers involved in the organic marked both at the EU and national levels. Popular reports will be targeted at consumers in order to specifically inform about the progress which is being made. Several members of the consortium behind AuthenticFood have significant experience in communicating through popular media such as newspapers, web based science portals, popular consumer magazines and newsletters aimed at the organic sector. In AuthenticFood we will continue this tradition and publish several popular reports and articles when sufficient amounts of data has been collected.

How to reach the endusers

The impact of AuthenticFood to target groups is ensured by the inclusion of project partners from the inspection and certification bodies of various European countries with significant expertise in authentication and organic agriculture.

Further information

This project is funded via the ERA-net CORE Organic II by national funds to each partner. CORE Organic II is a collaboration between 21 countries on initiating trans-national research projects in the area of organic food and farming. In 2011, CORE Organic II selected AuthenticFood and 10 other projects.

Read more at the CORE Organic II website: <http://www.coreorganic2.org/> and find publications from the project at www.coreorganic2.org/AuthenticFood and at: <http://orgprints.org/view/projects/AuthenticFood.html>

