

New European organic research initiated



CORE Organic II

Joining forces to improve sustainable development in food production

Just as birds of passage can gain up to 70 percent of energy in coordinating their efforts by flying in formation, research programmes can profit from transnational coordination.

CORE Organic II is a European transnational research cooperation project supported by the European Commission consisting of 26 partners from 21 European countries. The partners collaborate on funding transnational research projects.

CORE Organic II builds on the first CORE Organic (2007-2010) and consists of three calls for research proposals. The funding bodies plan to continue the collaboration in the coming years with calls every 2-3 years.

This leaflet presents the 14 running research projects initiated in 2011-2013 within the thematic organic research areas: plant breeding, cropping systems, phosphorus management, monogastric animal production food quality and organic market.



26 partners from 21 European countries

Austria, Denmark (ICROFS coordinator), Turkey, Finland, France, Germany (BLE deputy coordinator), Italy, The Netherlands, Norway, Sweden, Switzerland, United Kingdom, Belgium, Czech Republic, Estonia, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, and Spain.

Six thematic research areas

The 14 projects are structured around the six thematic research areas. In the following, all fourteen research projects are presented in brief:

Plant breeding

Improvement of production efficiency and agricultural biodiversity within cropping systems by using eco-compatible breeding techniques (1 project)

Cropping systems

Designing robust and productive cropping systems at field, farm and landscape level (6 projects).⁷

Phosphorus management

Sustainable and efficient management of phosphorus and use of secondary fertilizers within organic agriculture (1 project)

Monogastric animal production

Robust and competitive production systems for pigs, poultry and fish (3 projects).

Food quality

Ensuring quality and safety of organic food along the whole chain (2 projects).

Organic market

Supporting the development of organic markets (1 project)

Breeding

COBRA: Coordinating Organic plant Breeding Activities for Diversity

Organic plant production is currently challenged by several pressure factors. Along with perennial problems such as weed control, climate change is threatening to affect crop production through increasing weather variability.

COBRA will coordinate, link and expand on-going organic breeding activities in cereals and grain legumes across Europe. Besides regular breeding activities, one focus is on high-diversity (Hi-D) approaches to cope with future challenges such as climate change.

Phosphorous

Improve-P: Improved Phosphorus Resource efficiency in Organic agriculture Via recycling and Enhanced biological mobilization

Organic farming systems rely on the efficient use and recycling of available resources. Currently, some mineral nutrients like phosphorus (P) are used only once to produce food. Subsequently, they are lost due to poor recycling of organic wastes back to farmland.

Objective: The overall aim of this project is to develop and evaluate sustainable strategies for increased recycling of phosphorous and other nutrients from alternative P fertilizers, combined with the development of measures to enhance plant P availability due to agronomic innovations.

Market

HealthyGrowth: From niche to volume with integrity and trust

Organic markets are different in different European countries, but common to all is that local organic market chains have inherent problems in moving from niche to volume, and mainstream large-scale market chains have inherent problems in securing and advancing organic values.

Objective: HealthyGrowth aims to investigate a range of successful mid-scale organic value chains in order to learn how they are able to combine volume and values, and to use this knowledge of the prerequisites for healthy growth to support the further development of the organic markets.



BICO POLL: Targeted bio-control and pollination enhancement

Organic berry and fruit production suffers heavily from the lack of effective disease and pest management tools, and from inadequate insect pollination at times. As a consequence, the expanding demand on organic berries cannot be filled today.

Objective: The project aims to change this, and to improve yield and quality of organic fruit/berry production, and farm economics. The project will use bees to 1) target deliver biological control agents to the flowers of the target crops, and 2) improve the pollination of organic horticultural crops.

BIO-INCROP: Innovative cropping techniques to increase soil health in organic fruit tree crops

Multi-annual crops such as fruit tree crops are affected by soil sickness or yield decline. "Replant disease" is the main biological component of this problem due to the eco-functional intensification of growing areas specialising in fruit production.

Objective: To develop innovative management options able to increase soil biological functioning, focusing the attention on soil suppressiveness: the natural ability of soil to control soil-borne pathogenic agents of replant disease.

InterVeg: Enhancing multifunctional benefits of cover crops – vegetables intercropping

There is a need to verify if the introduction and proper management of intercropping in vegetable production systems allows comparable yields and produce quality in comparison to the sole cropping systems, reducing the use of auxiliary, off-farm, inputs and non-renewable energy consumption.

Objective: The project aims at verifying that the cover crops vegetables intercropped farming systems should perform better in terms of environmental impact and profitability – due to reduced production costs. This hypothesis is tested in a range of European areas where open field organic vegetable production is a relevant activity.

Softpest multitraps: Semio-chemical traps for management of weevil and plant bug in organic strawberry and raspberry

In the absence of effective control measures, the strawberry blossom weevil, the European tarnished plant bug and the raspberry beetle cause large (10-80%) losses in yield and quality in organically grown strawberry and raspberry.

Objective: To exploit the natural semio-chemical mechanisms of sexual attraction and host plant finding of key pests to develop effective semio-chemical traps for their management through mass trapping. Attractive lures will be combined into a single multi-trap for economic management of these pests simultaneously in each crop.

TILMAN-ORG: Reduced tillage and green manures for sustainable organic cropping systems

Organic farming systems contribute to ecosystem services such as the maintenance of soil quality and biodiversity. Reduced tillage and green manures are efficient tools for conservation agriculture that can be adapted to further improve organic crop production systems.

Objective: To design improved organic cropping systems with, 1) enhanced productivity and nutrient use efficiency, 2) more efficient weed management, and 3) increased biodiversity, but 4) lower carbon footprints – in particular increased carbon sequestration and lower GHG emissions from soils.

Vineman.Org: Enhancing disease management, yield efficiency, and biodiversity in organic European vineyards

Disease control is one of the main – and most difficult – tasks in organic viticulture. Designing, developing, and testing innovative cropping systems for organic vineyards in Europe is therefore an important effort.

Objective: Improving disease control by integrating plant resistance against fungal pathogens, cropping practices, and use of BCAs depending on environmental conditions. Its focus is on enhancing organic grape production and its stability through a more efficient control of the grape diseases.

AuthenticFood: Fast methods for authentication of organic plant based foods

Increasingly, mislabelled conventional food products are fraudulently sold as organic. Therefore, there is an urgent need for developing analytical methods, which allow for discerning organic from conventional food products.

Objective: To test a portfolio of the most promising analytical methods, markers and concepts for their ability to authenticate organic products. It also aims at providing the needed tools to give confidence to consumers and thus promote organic food through assured authenticity.

SafeOrganic: Restrictive use of antibiotics in organic animal farming

A major food-safety concern is the spread of antibiotic resistance along the food-chain. This is due to the risk of treatment failure of human food-borne infections. The organic pig production is probably characterized by significant lower levels of antibiotic resistance.

Objective: To document whether organic pigs in different European countries show lower levels of antibiotic resistant bacteria compared to conventional pigs. Furthermore, the project will look into a seemingly widespread routine of slaughtering conventional and organic animals at the same slaughter lines without special hygiene barriers to avoid cross-contamination.

Contact the CORE Organic Secretariat

CORE Organic II is coordinated by the International Centre for Research in Organic Food Systems, ICROFS (www.icrofs.org).

Contact CORE Organic secretariat
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The CORE Organic Board

Monogastric

HealthyHens: Promoting good health and welfare in European organic laying hens

Egg production in line with organic principles includes outdoor access, preferential use of preventative measures and alternative treatment methods, a 100 percent organic diet from 2012 onwards and consistent use of non-beak trimmed birds.

Objectives: The project focuses on the main challenges for organic laying hen farms regarding disease management, adverse animal welfare and negative impacts on the environment. Parasite infestation levels as well as prevalence of major health and welfare problems such as feather pecking and cannibalism are affected by a combination of housing and management factors.

ICOPP: Improved contribution of local feed to support 100% organic feed supply to pigs and poultry

This project is highlighted by the requirement to base the feeding of organic produced poultry and pigs on feed of 100 percent organic origin across Europe from the 1st January 2012.

Objective: Producing economically profitable feeding strategies based on 100 percent organic feed for poultry and pigs. The working hypothesis is that it is possible to produce strategies which comply with the aims for high animal welfare, production economy and environmental concerns.

ProPIG: Strategies to reduce environmental impact by improving health and welfare of organic pigs

Robust and competitive organic pig production needs to encompass low environmental impacts and good animal health and welfare. In theory, improving animal health and welfare reduces environmental impacts through decreased medicine use and feed conversion efficiency. However, due to scarce data on environmental impacts, the extent of such improvement has never been verified on working farms.

Objective: In organic pig production, health and welfare improvements must be implemented through preventive approaches, optimal disease management and innovative systems regarding outdoor areas. This is a challenge to the farms. This project records data on organic pig farms, calculates nutrient balances and Life Cycle Assessment for several contrasting scenarios and develops and evaluates farm specific improvement strategies.



Follow the CORE Organic II projects

Follow the CORE Organic II research projects at the website: www.coreorganic2.org.