Designing resilient organic greenhouse production systems for Europe

Greenhouse production is a highly intensive cropping system that guarantees out-ofseason production in any climatic condition. The recently launched project 'Greenresilient' aims to demonstrate the potential and feasibility of an agroecological approach to organic greenhouse production in Mediterranean, Central and Northern European organic production.

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The year-round production of high quality and tasty vegetables in unheated and low-energy greenhouses or polytunnels, using resilient, sustainable and local systems, is a challenge.

The main objective of the new 3-year Greenresilient project is therefore to design robust agroecosystems in protected conditions, which are able to maintain high and stable production with a low environmental impact. While in Central and Northern European countries, the major challenge is to produce crops in low-energy systems under low temperature and low light conditions, in Mediterranean countries, the challenge is to reduce the use of plant protection products (for example copper).

The use of agroecological practices in organic greenhouse production systems constitutes an innovative approach to a traditionally intensive system of organic production.

The project will also assess the environmental sustainability of the different cropping systems, using a Life Cycle Assessment (LCA) approach to calculate the environmental impact of two "extreme" strategies within the five experimental sites of the project.

In order to reach these objectives, a team of scientists with multidisciplinary competences (agronomy, agroecology, soil chemistry, entomology, plant pathology, weed science) from twelve research centres in eight European countries are involved.

During the kick-off meeting held on the 18-20th of April, 2018 in Capua, Italy, Greenresilient project coordinator, Dr. Fabio Tittarelli of the Italian Council for Agricultural Research and Economics (CREA), presented the timeline and the interactions among project activities. Work package leaders and participants detailed and planned the work to

be done in the first year of the project.

The project is funded by CORE Organic Cofund funding bodies, which are partners of the Horizon 2020 ERA-Net project CORE Organic Cofund.

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Read more about GreenResilient

Project partners

- Agroscope, Switzerland
- Department of Food Science, Aarhus University (AU-FOOD), Denmark
- > Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria (CREA), Italy
- > Research Institute of Organic Agriculture (FiBL), Switzerland Research Group for Organic Farming (GRAB), France
- Horticultural College and Research Institute (HBLFA), Austria Institute for Agricultural and Fisheries Research (ILVO), Belgium
- > La Colombaia, Italy
- > Vegetable Research Centre Kruishoutem (PCG), Belgium
- > Swedish University of Agricultural Sciences (SLU), Sweden
- > Institute for Biodiversity and Ecosystem Dynamics (UvA), Netherlands
- > Stichting Wageningen Research, Research Institute Wageningen Plant Research (WUR), Netherlands

Project website www.greenresilient.net





More about Greenresilient and CORE Organic

The CORE Organic Cofund transnational project GREENRESILIENT, aiming at demonstrating the potential and feasibility of an agroecological approach to organic greenhouse production, was launched on April 2, 2018. It will last 36 months and will end next 1st of April 2021. The project has twelve partners from eight countries across Europe.

CORE Organic Cofund is a project in the framework of the European Union's ERA-NET scheme - a network of European ministries and research councils funding research in organic food systems at national levels. The main focus of ERA-NET is to join forces and fund transnational research projects and support a focused and coordinated research and innovation effort covering the most important challenges along the organic value chains.

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