

Partners

SolACE is a multi-actor project with 25 research, industry and extension partners in 14 European countries:



Research ●

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- 2 AIT, Austria
- 3 CREA, Italy
- 4 FiBL, Switzerland
- 5 JHI, United Kingdom
- 6 KU, Denmark
- 7 SU, Turkey
- 8 SLU, Sweden
- 9 UCLouvain, Belgium
- 10 UE, Portugal
- 11 UHO, Germany
- 12 UNEW, United Kingdom
- 13 UPM, Spain
- 14 Agroscope, Switzerland

Industry ●

- 17 DCM, Belgium
- 22 Solynta, The Netherlands
- 23 SP, Germany
- 24 Syngenta, France
- 25 Agrobiota, Germany

Extension ●

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- 16 CON.CER, Italy
- 18 ECAF, Belgium
- 20 LEAF, United Kingdom
- 21 ÖMKi, Hungary

Other ●

- 19 IT, France

Located in 14 Countries

Project info

- > Project title: SolACE - Solutions for improving Agroecosystem and Crop Efficiency for water and nutrient use
- > Funding: Horizon 2020, the research and innovation programme of the European Union, and Swiss State Secretariat for Education, Research and Innovation (SERI)
- > Grant agreement No 727247; SERI contract number 17.00094
- > Project duration: 5 years (May 2017 to April 2022)
- > Project website: www.solace-eu.net

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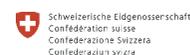
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Solutions for improving Agroecosystem and Crop Efficiency for water and nutrient use



Wheat trials in the canton of Berne, Switzerland.

Addressing reduced water and nutrient availability through improved crops and agricultural management

European agriculture is challenged by the need to produce more crops whilst tackling reduced availability of fertilisers, in particular nitrogen (N) and phosphorus (P), combined with reduced or more variable rainfall, which impacts soil water availability. The SolACE project identifies and tests novel solutions for improving agroecosystem and crop efficiency for water and nutrient use. These innovations aim to ensure optimum crop productivity under combined water and nutrient (N or P) limitations.

www.solace-eu.net

Project aims and work

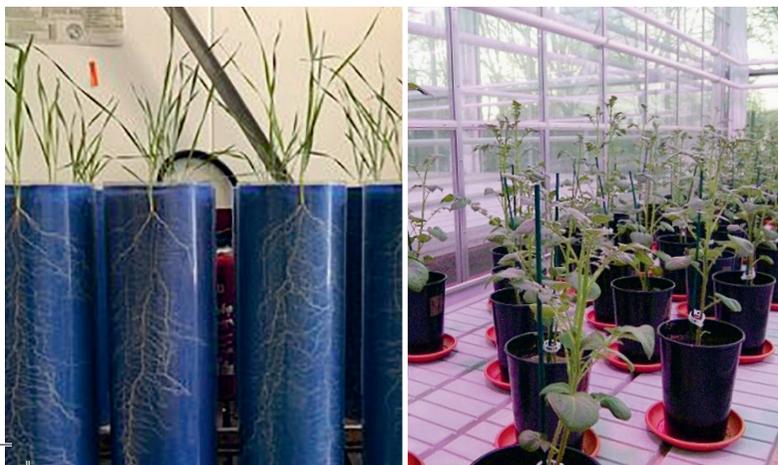
- > Assess the present day and future scenarios of combined water and nutrient (N and P) stresses in various regions in Europe;
- > Identify above- and below-ground plant traits that improve the efficiency of water and nutrient (N and P) use;
- > Assess agroecosystem management innovations that can improve the efficiency of water and N and P use on-farm;
- > Evaluate breeding strategies that can help to respond to combined shortages in water and nutrients (N and P);
- > Evaluate proposed innovations with farmer networks to assess local solutions and barriers for their uptake;
- > Disseminate the findings of SolACE to a broad spectrum of stakeholders, including farmers, farm advisors, agri-business actors and policymakers.

Approaches

SolACE uses a wide range of approaches throughout the project, such as on-farm experiments, field trials at experimental stations and phenotyping platforms.

4PMI bread wheat experiment in Dijon, France.

Greenhouse experiment performed with potato at UCLouvain in Belgium.



Novel solutions delivered by SolACE

- > SolACE is developing microbial inoculants with improved efficiency by innovative formulations;
- > SolACE is developing new hybrids for bread wheat and potato, that are better adapted to abiotic stresses than currently available varieties;
- > As the market for high-quality (organic / organo-mineral) fertilizers and microbial inoculants is growing steadily; SolACE is assessing and refining the agricultural, economic and environmental benefits of the use of such products and their combinations, in field trials and farmers' networks.

Testing innovations with a focus on potatoes, bread wheat and durum wheat

- > The team of researchers and farmers are testing innovations such as crop variety mixtures, legume-based crop rotations, cover crops, microbial inoculants, and improved decision support systems to help cope with combined water and nutrient stresses;
- > Furthermore, hybrids or products from genomic selection and participatory breeding activities are tested to create more resilient plant material;
- > SolACE focuses its activities on three major European crops – potato, bread wheat and durum wheat.

Get involved

The SolACE stakeholder forum is engaged in active dialogue and provides expertise to address key issues. If you wish to join the stakeholder forum please register at

www.solace-eu.net/get-involved

Outcomes of SolACE

- > New crop varieties, especially hybrids of bread wheat and potato, and agronomical innovations to cope with combined water and nutrient stresses;
- > Better knowledge and use of N derived from legumes for the next crop in a rotation;
- > Better understanding of below-ground responses to water and nutrient limitations;
- > Tools for the training of farmers and farm advisors on the importance of below- and above-ground processes / traits for resource use efficiency;
- > Below-ground traits introduced as a novel concept for breeders;
- > Co-creation, and co-evaluation of plant material and agroecological innovations with small and large companies;
- > Identification of barriers / drivers for the uptake of agroecological innovations, including at regulatory / legislative levels and dialogue with relevant stakeholders.

Sorting of tubers into different size categories, Hungary.

Farmers' networks, on-farm experiments and field demonstrations play an important role in SolACE

