Rennes
France
10-12 December
2018

Final Congress

Cultivating diversity and food quality

What is DIVERSIFOOD?

DIVERSIFOOD is a European project aiming at enriching cultivated biodiversity, by testing, renewing and promoting underutilized or forgotten crops. Through multi-actor approaches, it supports the spread of a new food culture, based on diverse, tasty and healthy food.

www.diversifood.eu

PROCEEDINGS

DIVERSIFOOD

DIVERSIFOOD Congress 2018

'Cultivating Diversity and Food Quality'

10-12 December, Rennes, France

Introduction

Véronique Chable[1], Frédéric Rey[2], Ambrogio Costanzo[3]

[1] INRA de Rennes, France, www.rennes.inra.fr/sad-bcrp, veronique.chable@inra.fr

[2] ITAB (Institut Technique de l'Agriculture Biologique), France, www.itab.asso.fr , frederic.rey@itab.asso.fr

[3] Organic Research Centre, UK, www.organicresearchcentre.com, ambrogio.c@organicresearchcentre.com

DIVERSIFOOD is a European project aiming to enrich cultivated biodiversity by testing, renewing and promoting underutilized or forgotten crops. Through multi-actor approaches, it supports the spread of a new food culture, based on diverse, tasty and healthy food.

This event is the final congress of DIVERSIFOOD (2015-2019). DIVERSIFOOD results and key lessons will be shared, covering complementary approaches connected with crop diversity for resilient sustainable food systems:

- Underutilized/forgotten crops: multi-actor and on farm evaluation
- New approaches of plant breeding for diversified and sustainable farming systems
- Community biodiversity management
- Diversity and sustainability within food systems: new relationships among actors
- Paradigm shift for multi-actor and transdisciplinary research

This scientific Congress is opened for external oral speakers and/or poster presentations, to better connect sister projects and researches with DIVERSIFOOD outputs.

This congress will provide inputs to shape DIVERSIFOOD messages for the future, on how to better embed crop diversity for resilient sustainable food systems and move toward a real socio-ecological transition.

Diversifood final congress has been designed by the consortium as a platform to share with a large community, results, issues and perspectives. It is based on two main and associated hypotheses:

(1) embedding cultivated diversity in the European territories is the foundation of sustainable and resilient food systems,
(2) the ultimate goal of a resilient agricultural system is to provide high quality food.

Our food quality concept has been developed as a broad concept to enhance all forms of quality from seed to market. Thus, food quality covers a wide range of traits that are defined in the context of sustainable and healthy diets and local food culture. These traits are also covering ethical and social values, nutritional and taste characteristics, and the respect of natural processes. DIVERSIFOOD has shown that developing crop diversity in the fields cannot be dissociated from ensuring all forms of qualities in the plate.

DIVERSIFOOD final congress will reflect all project activities and methodological developments following our multi-actor research organisation as a red thread about:

(1) Evaluation of underutilized/forgotten crops,
(2) New approaches of plant breeding for diversified and sustainable farming systems,
(3) Cultivated diversity management within Community Seed Banks,
(4) Relationships among actors involved diversity and sustainability within food systems and
(5) Research organisation for the paradigm shift toward a "life-oriented" paradigm to boost diversity at all levels within a holistic perspective.

For all these topics, crop and food system diversity have been explored considering different sources of knowledge and integrating objectives for environmental and social sustainability. During the congress, sister projects and researches will expand DIVERSIFOOD outputs to better embed crop diversity for resilient sustainable food systems and move toward a real socio-agro-ecological transition.

Thanks to the event, the DIVERSIFOOD conceptual context will be also strengthened by key-note speakers who will provide inputs to boost and complete DIVERSIFOOD messages for the future. Michel Pimbert (from Coventry University in UK) will highlight the main institutional, methodological, and policy challenges for a transformative paradigm change in the production of knowledge for diversity and sustainable food systems. He

will provide thoughts to democratize the production of transdisciplinary knowledge to expand the construction of agroecological skills for enhanced biocultural diversity in food systems.

Micaela Colley (from the Organic Seed Alliance in the USA) will examine many parallelisms that exist between the United States (US) and Europe regarding the motivations, initiatives and emerging models for organic seed systems development. Differences in governance, history, and social factors impacting progress will also be highlighted.

Philip Howard (from Michigan University in the USA) will expand the DIVERSIFOOD perspective by reminding us the most dominant trends in food and agricultural systems toward specialization and uniformity, despite a long list of negative impacts that typically result. Although counter-trends are currently quite small, some are growing very rapidly fostering decentralization, cooperation and transparency. These efforts are critical for maintaining a sufficient reservoir of knowledge, skills and plant and animal diversities to replace uniform food systems.

For the last day of the congress, you are invited to farm visits that will be followed by two parallel workshops:

- Two farmers based in the surroundings of Rennes (Brittany), involved in crop diversification and on-farm seed production will explain and demonstrate how they integrate all activities from seed to products, aiming at producing high quality produces for local markets. Both are organic farmers, one mostly arable, the other a vegetable grower.
- One workshop will associate LIVESEED partners and other H2020 teams (e.g. ReMIX) to better conceptualise how to fit organic plant breeding in the IFOAM principles. The key hypothesis to explore is that plant breeding is not only matter of efficiency, but it also entails ethical aspects such as food and seed sovereignty and food quality. This workshop aims to develop a shared vision of organic and system-based breeding as an overarching approach to integrate different breeding strategies and tools, and entrepreneurship, but also a change in attitude based on corporate responsibility, circular economy and true-cost accounting, and fair and green policies.
- A second workshop will brainstorm and explore how to boost the transition to more sustainable food systems through a multi-actor and transdisciplinary approach. This approach has a strong potential to achieve this outcome, but it cannot be funded only through short terms projects. We need to collectively develop a long term strategy and to find adapted means to implement the life-oriented paradigm. To deal with the complexity of real societies, we need a transition from the proofs-of-concept within EU projects towards a more systematic deployment. Alternative organisational and funding models need to be developed to produce effective impacts at a significantly larger scale.

We ultimately hope that this congress will consolidate a new research community closely linked to practitioners, for agroecological transition and for the revival of cultivated biodiversity. Connecting diversified knowledge and common wills will boost the embodiment of a life-oriented paradigm.

Poster in 3 min

LIVESEED boosting organic seed and plant breeding across Europe

Monika M. Messmer[1]; Freya Schäfer[2]; Maaike Raaijmakers[3]; Frédéric Rey[4]; Véronique Chable[5]; Edwin Nuijten[6]; Edith Lammerts van Bueren[6]; Pedro Mendes-Moreira[7]; Riccardo Bocci[8]; Dora Drexler[9]; Susanne Padel[10]; Raffaele Zanoli[11]; Alexandra Fuss[12]; Bram Moeskops[12]

[1] Research Institute of Organic Agriculture, FiBL Switzerland, www.fibl.org, monika.messmer@fibl.org
[2] Research Institute of Organic Agriculture, FiBL Germany, www.fibl.org, freya.schaefer@fibl.org
[3] Bionext, The Netherlands, www.bionext.nl, Raaijmakers@bionext.nl
[4] Institut Technique de l'Agriculture Biologique. ITAB, France, www.itab.asso.fr, Frederic.rey@itab.asso.fr
[5] INRA de Rennes, France, www.rennes.inra.fr/sad-bcrp, veronique.chable@inra.fr
[6] Louis Bolk Institute, LBI, The Netherlands, www.louisbolk.org, e.nuijten@louisbolk.nl, E.Lammerts@louisbolk.nl
[7] Instituto Politécnico de Coimbra – Escola Superior Agrária de Coimbra, Portugal, pmm@esac.pt
[8] Rete Semi Rurali, RSR, Italy, www.semirurali.net, riccardo.bocci@semirurali.net
[9] Hungarian Research Institute of Organic Agriculture, ÖMKi, Hungary, www.biokutatas.hu, dora.drexler@biokutatas.hu
[10] Organic Research Center, ORC, The United Kingdom, www.organicresearchcentre.com, susanne.p@organicresearchcentre.com
[11] Università Politecnica delle Marche, Italy, www.univpm.it, zanoli@agrecon.univpm.it
[12] IFOAM EU Group, Belgium, www.ifoam-eu.org., alexandra.fuss@ifoam-eu.org, bram.moeskops@ifoam-eu.org

Key words: organic seed, organic breeding, seed health, networks, organic regulation, seed supply chain

Abstract

The European project LIVESEED (www.liveseed.eu) is based on the concept that cultivars adapted to organic systems are key for realizing the full potential of organic agriculture in Europe. LIVESEED will help to establish a level playing field in the organic seed market across Europe, improve the competitiveness of the organic seed and breeding sector, and encourage greater use of organic seeds by farmers. LIVESEED will improve guidelines for cultivar testing and strategies for ensuring seed health. It will develop innovative breeding approaches suited to organic farming. Finally, it will investigate socio-economic aspects relating to the use and production of organic seed and their interaction with relevant (EU) regulations. The LIVESEED project (2017 – 2021) is coordinated by IFOAM EU with FiBL for scientific coordination and consists of 35 partners and 14 third linked parties from 18 European countries. LIVESEED received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727230 and by the Swiss State Secretariat for Education, Research and Innovation (SERI) under contract number 17.00090.

By connecting several networks LIVESEED will combine co-construction and exchange of knowledge integrating biological, technical, legal, organisational, financial and political aspects as well as market development to facilitate fast upscaling and outreach of various tailor -made socio-technical, evidence based, innovation tracks. LIVESEED will generate (i) a tool box of measures and interventions to match production and demand of organic seed, (ii) validated options for competent authorities to reduce the number of derogation for untreated conventional seed, (iii) develop technical solutions for national databases of organic seed including an interface to a European wide router database to increase the transparency on the availability of organic seed, (iv) analyse in depth formal and informal seed chains, (v) explore various business models including checklists for setting up new multiplication and breeding initiatives, (vi) produce technical factsheet on the best practice guidelines for seed production for major crops including vegetative plant propagation material, and (vii) an develop organic seed quality strategy including quality control of farm saved seeds and efficiency of seed exchange networks.

With respect to organic plant breeding LIVESEED will provide new concepts for designing and implementing decentralized breeding initiatives for organic and low-input agriculture through (i) establishing networks across Europe (e.g. for apple, brassica vegetables) and fostering public-private partnerships, (ii) combining farmer, value chain or community based system breeding with functional trait-based and molecular breeding approaches, (iii) identifying trade-offs between resilience traits and sensory and nutritional quality, (iv) developing breeding schemes for heterogeneous cultivars and species mixtures, and (v) elaborating different financing models. Considering the plant as a mega organism, including the above and below ground associated microorganism, has the potential to evoke a paradigm shift in plant breeding, and will be elucidated in case studies.