



Cultivating Diversity and Food Quality

DIVERSIFOOD final congress

12 December 2018 Rennes, France - Day 3

Concept note for Workshop 1:30 pm - 4:30 pm

Liveseed workshop: from trait-based to systems-based organic breeding

Objective of the workshop

Using the IFOAM principles as starting point, plant breeding is not only about improving efficiency, but also entails ethical aspects such as food and seed sovereignty and food quality. A concept is developed for organic plant breeding to produce varieties that strengthen both ecological and societal resilience by striving for six international sustainability targets: food security, safety and quality; food and seed sovereignty; social justice; agrobiodiversity; ecosystem services; and climate robustness. Systems-based breeding is an overarching approach to integrate different breeding strategies and tools, and entrepreneurship, but also involves a change in attitude and culture based on corporate responsibility, circular economy and true-cost accounting, and fair and green policies. The systems-based breeding concept aims to integrate aspects of community-based, corporate-based, ecosystem-based and trait-based breeding approaches and will be presented and used as basis to develop a shared vision of organic plant breeding.

With the multi-actor approach, several DIVERSIFOOD and LIVESEED research projects have a broad range of strategies to plant breeding. By comparing the various initiatives we will discuss and substantiate key elements for systems-based breeding. With concrete examples we will want to further elaborate the concept of systems-based breeding and discuss bottleneck and opportunities for upscaling.

Questions addressed during the workshop

- What can we learn from projects already applying a systems-based breeding approach?
- How to anchor social and ethical values into plant breeding through systems-based breeding?
- What key elements can be identified for systems-based breeding?
- What are concrete examples supporting systems-based breeding?
- What are the next steps needed to further operationalise systems-based breeding?

Expected participants

- Various DIVERSIFOOD and LIVESEED partners and stakeholders involved in multi-actor and participatory plant breeding. These can be breeders, researchers, farmers, processors and other actors in the value chain.
- Various DIVERSIFOOD and LIVESEED partners and stakeholders interested in broadening their view of plant breeding.

- Partners of other multi-actor projects (CERERE, DYNAVERSITY, ReMIX and others): based on experiences sharing, what common efforts can we highlight, and which cross initiatives can we build?
- Students interested in transdisciplinary and interdisciplinary approaches for sustainable development and plant breeding.

Context

Both DIVERSIFOOD and LIVESEED aim to broaden organic plant breeding approaches, by exploring at the same time both technical and socio-economic options for more sustainable approaches to plant breeding, taking a holistic systems perspective.

Propositions for the organisation of the workshop

The concept of systems-based breeding will be presented to the audience, followed by 3-4 case studies already applying the concept in existing breeding initiatives. Participants will be invited to share their experiences and suggestions to improve the concept of systems-based breeding and develop a shared vision on organic plant breeding. Key elements will be defined to accomplish such vision. The workshop will end with a roadmap how to achieve the required change of attitude and put systems-based breeding into practice.