



Knowledge  
Sustainability  
Embedding crop diversity and  
networking for local high quality  
food systems'  
Global Participation  
Innovation networks Role  
Produce Autonomy Life  
Farmers Ethics Healthy Citizens  
Sources Rights  
Seeds

# 9 Key-concepts for food diversity



Introduction

**DIVERSIFOOD** is a European H2020 project facing the challenge of promoting a new way of thinking about agriculture. Its ambition is: “embedding crop diversity and networking for local high quality food systems”.

Through multi-actor and transdisciplinary approaches based on relevant cases, **DIVERSIFOOD** aims to develop:

- Relevant locally developed adapted innovations
- New biodiversity management models
- New approaches to plant breeding and diversity management
- More diversity in crops, varieties and populations
- Diverse healthy and tasty food products and market valorisation
- Original research and communication tools to connect activities and people

What do we mean by food diversity? Nine key-concepts were developed together with all partners involved in **DIVERSIFOOD**. These definitions integrate practical and theoretical ideas, and natural science and social science perspectives. These common key-concepts are important as the partners have a diversity in backgrounds and hence different perspectives on the meaning of words. Together these key definitions will help facilitate research and communication among partners and with other stakeholders.

How **DIVERSIFOOD** deals with...

- Including all actors of food chain from seed to plate, fostering the development and maintenance of local food systems
- Promoting collaborative processes “from idea to implementation” in innovation around food practices
- Integrating theoretical & practical perspectives
- Promoting iterative learning among all actors involved
- Taking into consideration other dimensions involved in addition to technical and organizational issues, such as legal environment, economic issues, cultural and social dynamics

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## Diversified food system

### Definition

The food system is considered from field to fork promoting diversified crop varieties, animal breeds and end products, considering a diversity of consumers, diets and needs according to diverse environmental, socio-economic and cultural contexts in Europe.

Diversified food systems show different models, but all focus on sharing added value among stakeholders within networks and regional organizations. They offer conditions to consumers to choose and enjoy a broad range of locally adapted, tasteful, nutritional and healthy, as well as sustainably produced food.

How **DIVERSIFOOD** deals with...

**DIVERSIFOOD** is exploiting untapped and forgotten crops which belong to our common cultural ancestry:

- Increasing diversity of species, plant types and genotypes, by including untapped genetic resources, produced in agro-ecological systems
- Testing gluten quality and properties for cereals, and evaluation of nutritional traits for vegetables
- Managing multi-actor and participative organization of sensorial quality evaluation
- Exploring traditional knowledge and creating new cultivated populations

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## Food quality

### Definition

The concept of food quality has its roots in traditional produces from locally adapted crops. Food quality covers a wide range of traits that are defined in the context of sustainable diet and local food culture and that cover:

- ethical and social values
- nutritional, healthy components
- taste characteristics
- the respect of raw material and natural processes

How **DIVERSIFOOD** deals with...

**DIVERSIFOOD** considers that the adaptation of crops to their agricultural and cultural environments is a key component of sustainability and is taking into consideration that:

- Agrobiodiversity is the first pillar of crop adaptation and *in situ* evolutionary processes is the second
- People of all spheres of a food system (from seed to food) are equally concerned
- Socio-economic environments should be adapted to offer a place to diversities from seed to end products

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## Sustainable food systems

### Definition

Sustainable food systems are preserving diversity in resources for future generations, respecting human values and environmental richness. Sustainability applied to food system is a complex concept since it covers:

- production, processing, distribution, consumption and waste disposal activities
- social, legal, economic, ecological, cultural, ethical values

How **DIVERSIFOOD** deals with...

- Achieving empowerment of the different actors in the different phases of the food chain, by fostering social learning and participatory processes and multi-actor decision making in all chain activities
- Connecting the project activities with other contexts where producers' and consumers' rights about food are stressed and defended (e.g. the right to use farm-saved seed, referring to FAO/UN/International rights of farmers seed laws and informal seed systems organizations)

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## Food democracy

### Definition

Food democracy refers to the opportunity of people to decide in food matters (production, processing and consumption) and to actively participate in shaping their food systems. As such, it is a rights-based concept but also entails active engagement.

It covers empowerment and responsibility of all actors involved around food-related practices (breeding, farming, processing, food preparation, distribution and consumption), creating and promoting “food culture”.



## 8 Co-evolutionary processes

### Definition

A co-evolutionary process is a dynamic integration of various concomitant processes which can cover several dimensions:

- agro-ecosystem dimension in which plants co-evolve, due to genetic diversity, within their specific environments and according to human practices
- social dimension in which agriculture and culture co-evolve due to a bio-cultural diversity resulting in new solutions to societal challenges, integrating ethical dimensions (e.g. respect for integrity of the plant), and stimulating local development with "low tech, low input, accessible populations"
- other dimensions (legal, institutional, economic) that have an important impact in shaping the practices within the food system

## 7 Trans-disciplinarity and paradigmatic shift

### Definition

Trans-disciplinarity is the integration of different types and sources of knowledge coming from the interaction between different researchers and actors of the food chain (farmers, processors, cooks, craftsmen), and the capacity of this new shared pool of knowledge to produce more than the sum of the parts.

Paradigmatic shift is to consider different sources of knowledge equally and to share them, integrating objectives for environmental and social sustainability from a holistic perspective.

## 6 Collaborative, participative and action research

### Definition

A way of undertaking together experiments / surveys / studies which are decentralized in terms of ownership, responsibilities, and raising issues, and aiming for concrete applications to answer to societal challenges.

## 5 Community management of agro-biodiversity

### Definition

Groups of actors organized in networks that collectively manage seeds of population varieties for adaptation, breeding and conservation, and the associated knowledge to maintain and develop diversity of crops and food.

They share a common goal in seed management and local supply chains development and are engaged in developing new practices to cope with the current challenges of sustainability and food quality.

### How DIVERSIFOOD deals with...

- Promoting breeding techniques that respect and enhance the natural ability of the plant to adapt
- Exploring mechanisms of social innovation to introduce values about diversity and living processes within food chains and breeding
- Promoting social learning among all actors involved, as a way to reproduce knowledge hand-in-hand with practice
- Looking at ways to reshape the legal, institutional and economic environments according to both environmental and social sustainability challenges

### How DIVERSIFOOD deals with...

- Bringing together different types of knowledge and acknowledging and respecting plurality as a richness.
- Considering ethics and practical usefulness as important as scientific truth and the idea of change towards sustainability as needed in every field
- Working from field to plate through a multi-actor approach
- Stressing the importance of proximity, interaction, trust and shared knowledge between consumers and producers

### How DIVERSIFOOD deals with...

Acting together in a collaborative way. It is about sharing:

- Concepts
- Objectives
- Means and processes
- Identification of new questions and critical issues
- Organisation of actors and institutions participating in the process
- Ways of implementation and dissemination

### How DIVERSIFOOD deals with...

- Experimenting with collective dynamic management of agro-biodiversity on-farm, considering both formal and informal seed systems
- Analysing and defining collective organization of food chains aimed at enhancing and valorizing local agro-biodiversity
- Promoting collective organization of local markets, increasing awareness of public and policy makers, and designing labels to recognize locally bred seed

### At the level of the agro-ecosystem, SOLIBAM had proposed a first definition

Resilience is the capacity of an ecosystem to respond to a perturbation by resisting damage and recovering quickly. A resilient system will reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks. Thus, resilience is linked to the adaptive capacity of a system in the face of change.

Within **DIVERSIFOOD**, resilience concept is extended to the whole food system, including economic, social, political and cultural dimensions. Thus, resilience of the food system calls for adaptive capacities of the food chain at the agro-ecological and socio-economic level to provide sufficient high quality food and to maintain its cohesion over time.

### How DIVERSIFOOD deals with resilience

**Building resilient food systems means to connect all 8 previous concepts:**

Co-evolutionary processes (Concept # 8) within systems (such as the food system) support dynamic integration of several concomitant processes which cover several dimensions (economic, social, environmental, political, cultural and legal).

A food system is resilient when it fulfils its function of providing food based on diversity (Concept # 1), food quality (# 2) and sustainable development (# 3), within local and global conditions of food democracy (# 4) and community management of biodiversity (# 5).

To reach all these goals, **DIVERSIFOOD** is promoting collaborative, participative and action research (# 6) and trans-disciplinarity and a paradigmatic shift (# 7).

## 21 partners DIVERSIFOOD CONSORTIUM

### France

- INRA • Institut National de la Recherche Agronomique
- ITAB • Institut technique de l'Agriculture Biologique
- RSP • Réseau Semences Paysannes • Association pour la Biodiversité des Semences et Plants dans les Fermes
- IT • INRA Transfert

### UK

- ORC • Organic Research Centre

### Switzerland

- FiBL • Forschungsinstitut für Biologischen Landbau Stiftung
- PSR • ProSpecieRara

### The Netherlands

- LBI • Louis Bolk Instituut

### Portugal

- IPC • Instituto Politécnico de Coimbra
- ITQB • Instituto de Tecnologia Química e Biológica- Universidade Nova de Lisboa

### Italy

- UNIBO • Alma Mater Studiorum Università di Bologna
- UNIPI • Università di Pisa
- RSR • Rete Semi Rurali
- FORMICABLU • Science communication agency

### Cyprus

- ARI • Agricultural Research Institute

### Finland

- LUKE • Luonnonvarakeskus

### Spain

- CSIC • Agencia Estatal Consejo Superior de Investigaciones Científicas
- RAS • Asociación Red Andaluza de Semillas Cultivando Biodiversidad

### Hungary

- ÖMKI • Okologiai Mezogazdasági Kutatóintézet Kozhasznú

### Austria

- ARCHE NOAH • Arche Noah Schaugarten GMBH

### Norway

- OIKOS • Organic Norway



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