



# European crop diversification experiences enabled by value chain innovations

## Problem

Crop diversification experiences (CDE) aiming to enhance the sustainability of farming and agri-food systems, supported by actors all along the value chain, are being developed across Europe. In order to support the development of cropping system diversification as a lever of sustainability, there is a need to learn from these experiences and to better understand their drivers, barriers and the solutions to these barriers.

## Solution

Modelling agro-food system players' worldviews across a diversity of 13 European CDE mobilising value-chain innovations allows for the drivers and barriers they face in three main dimensions to be highlighted: agronomy, socio-economy and ecology.

## Benefits

Key drivers, enablers, barriers, potential solutions to overcome these and their relative importance were identified through the analysis of 1293 relationships existing between actors and social, economic and ecological concepts highlighted by the 13 European CDE.

## Practical recommendation

- Besides farmers, cooperatives and manufacturers are playing a central role in the success of a value chain innovations. They can initiate innovations and be an important source of knowledge on diversification techniques as well having the potential to set quality requirements, therefore having an impact on farming practices.

## Applicability box

### Theme

Barriers and enablers, cropping system, learning, actors, value chain, multiple cropping, intercropping, rotation

### Agronomic conditions

All European cropping systems

### Application time

Any time

### Required time

Continuous learning process

### Period of impact

Duration of the crop diversification initiative

### Equipment

Depends on the crop diversification initiative

### Best in

Planning crop diversification initiatives

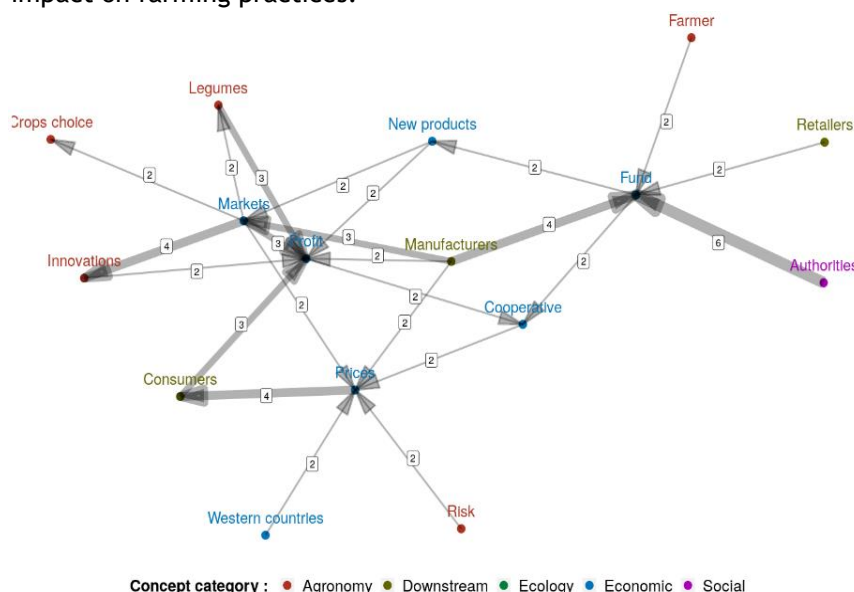


Table 1: Occurrence of the main concepts/factors, highlighted by 22 actors interviewed across 13 CDE supported by value chain innovations

Concepts	Centrality
Manufacturers	49
Innovations	45
Knowledge	44
Rotations	41
Cooperative	37
Farmer	32
Legumes	30
Soil	26
Profit	21
Farming practices	21

Figure 1: Central part of the map focusing on economic concepts across 13 crop diversification experiences linked to value chain innovations. These concepts and their inter-relationships, linked to both success and failures factors, have been identified through the 22 players interviews (Vanwindekens et al., 2019, internal report).

- Profit is central and is influenced by the markets and the consumers.
- New crops in rotations (such as legumes among others) are not always seen as profitable, and are initially implemented for an agronomic purpose (table 1 and figure 1). However, in the long term, diversification can be associated with profitability, as a consequence of the market development to deliver the products of the value chain.
- The existence of a market for a product is an essential precondition for launching a sustainable experience.
- Consumers' choices have a direct impact on the profitability of the experience. Consumers are, themselves, influenced by the prices of the products of the diversification.
- From farmers point of view, the fact that labour costs vary from one European country to the other can also influence the prices of products on the market. Prices of products should also be influenced by the risk associated with the innovation.

## Further information

### Further readings

Seminal paper on the methodological approach (<https://doi.org/10.1016/j.ecolmodel.2012.11.023>)

Diversification des systèmes de cultures : les défis (<https://zenodo.org/record/2574549>)

### Weblinks

<https://frdvnw.gitlab.io/cogmapr/>

## About this practice abstract and DiverIMPACTS

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**Authors:** Frédéric M. Vanwindekens

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FIRAB (Italy), Bionext (Netherlands), IUNG-PIB (Poland), AIDER (Romania), SLU (Sweden), FiBL (Switzerland), LEAF (United Kingdom).

DiverIMPACTS: The project is running from June 2017 to May 2022. The overall goal of DiverIMPACTS - Diversification through Rotation, Intercropping, Multiple Cropping, Promoted with Actors and value-Chains towards Sustainability - is to achieve the full potential of diversification of cropping systems for improved productivity, delivery of ecosystem services and resource-efficient and sustainable value chains.

**Project website:** [www.diverimpacts.net](http://www.diverimpacts.net)

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