

Translating knowledge for legume-based farming for food and feed (Legumes Translated)

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1 Introduction

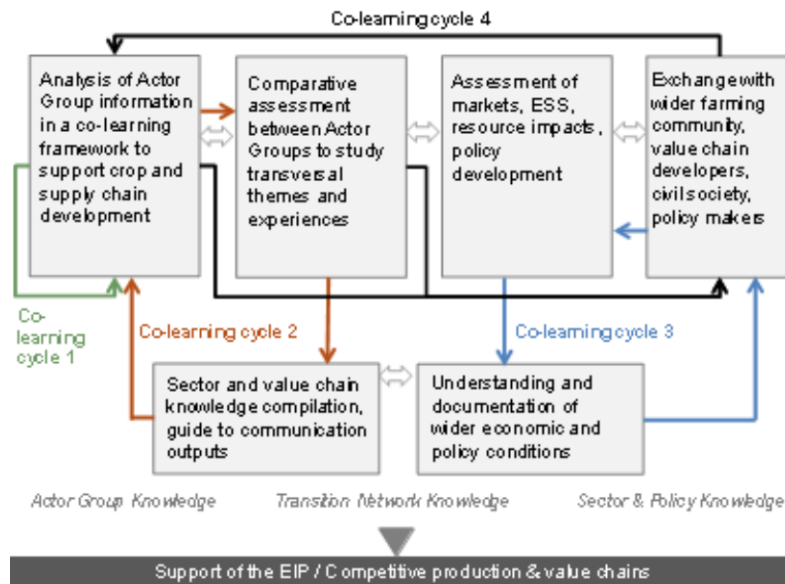
Legumes Translated is a new thematic network in Horizon 2020. It supports the Agricultural European Innovation Partnership (EIP Agri) by linking research- and practice-based knowledge to support legume cropping and use. It is therefore in line with the recently announced European Protein Plan (European Commission 2018) that mentions a knowledge platform for protein crops. The overall goal is to support the production and use of grain legume crops in Europe as part of an overall change in protein sourcing and use (Donau Soja, 2017). The challenges that legumes crops can help address are well-documented: the need for more diversity in cropping with more crops that support pollinators; yield stagnation in cereal-dominated systems (e.g. Brisson et al., 2010; Watson et al., 2017); and a 29% deficit in tradable plant protein that is met by about 35 million tonnes of soybean equivalent imported from the Americas (Murphy-Bokern et al., 2017). This is a fundamental challenge to the resilience, acceptance and performance of our agri-food systems. There are indications that Europe is now on the cusp of a significant change manifest in the positive political response to the Donau Soja European Soya Declaration and the European Commission's work on Europe's protein balance. Thematic networks are a key element of the EIP Agri. funded from Horizon 2020. They complement both operational groups and Horizon 2020 research and innovation projects by compiling and validating existing knowledge and best practices and providing wider access to this knowledge with particular emphasis on trans-national border knowledge interaction. Legumes Translated has three underlying principles: empowerment of innovators through understanding; practice- and research-based sources of knowledge are mutually supportive; and cropping and farming system innovation must go hand-in-hand with corresponding value chain developments (especially in livestock).

2 Actor groups and transition networks: the primary source of practice-validated knowledge

The project concept is based on the networking of 15 existing groups of farmers and other innovators (actor groups) within an international framework provided by seven transition networks. These actor groups are already supported by public initiatives such as the German Plant Protein Strategy and private initiatives such as Donau Soja. The seven transition networks that they interact in are: Cool-season grain legumes; Soy; Food; Pigmeat; Poultry; Dairy and beef; and Aquaculture. These transition networks promote increased flow of

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practical information from actor groups between geographic areas with exchange occurring from southern Finland to Greece and from Ireland to Bulgaria. Supported by three analytical work packages, the transition networks enable exchange and rigorous knowledge synthesis and compilation at four levels: specific actor group farming systems; between related actor groups within seven networked technical areas of the agricultural sector (sub-networks called transition networks); exchange between research-based partners and the policy community; and between actor group-level knowledge and the policy community.



3 Results

Establishing and running an efficient thematic network is a complex task that must be completed in a relatively short project period. Supporting and benefiting from the ‘bottom-up’ multi-actor approach must be balanced by the use of a ‘top-down’ approach to analysis of information. Within the first six months, our actor groups have provided detailed information on their activities and ambitions and we have successfully established seven vibrant transition networks. Focus is essential for a three-year project and so we have already completed examples of our major outputs: practice notes/abstracts and videos. The synthesis of information from actor groups within the transition networks has identified four areas of demand for knowledge: the farm-level economic impact of introducing grain legumes into cropping systems; the nutritional and economic valuation of legumes for animal feed; knowledge exchange for soya production and use; and the testing/validation of environmental claims made corporate social responsibility schemes. The project will produce practice notes and abstracts, practice and development guides, and videos on a multi-lingual knowledge internet platform (The Legume Hub). This is an open publishing facility which is open to all interested in this innovation area.

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