

## COBRA-DIVE

Optimising growing conditions for organically grown legume varieties.



### Inspiration

High value protein sources are important for humans and animals alike. Legumes in particular have a large potential to provide high quality protein, however, their potential is often not fully used, and crop varieties are often poorly adapted to the local environment. Organic plant production is challenged by the perennial problems of weed control and plant nutrient supply, as well as weather variability due to climate change. Plant breeding is a crucial factor in creating organic crop production systems that can better cope with these stresses. COBRA-DIVE aims to emphasise the use of adapted genetic variants of legume crops in order to assure optimal plant breeding strategies.

### Innovation

COBRA-DIVE proposes a combination of two complementary plant breeding strategies: specific adaptation to organic conditions through targeted breeding and variety selection, and wide adaptation through increased plant genetic diversity and plasticity to optimise the response to multiple, interacting and simultaneous stresses encountered under organic management. The project will focus on coordinating, linking and expanding ongoing organic breeding activities in cereals and grain legumes across Europe, drawing together experts from previously fragmented areas. In particular, links will be established through the transnational sharing of germplasm, data, and methodological knowledge, and the results and implications will be discussed in a diverse consortium.

### Impact

The results of the COBRA-DIVE project will impact a number of stakeholders. Some of the benefits include farmers having new varieties of crops that are better adapted to organic conditions, seed producers having better tools for seed quality improvements and better varieties, and breeders having new knowledge on efficient breeding tools and methods. Processors, traders and consumers will benefit from higher quality organic produce, while policy makers will have clear information on current legal, institutional and socio-economic hurdles for the organic breeding and seed sector. Finally, society in general will benefit from improved food security as a result of more resilient crops and new alternative for cooperation between breeders, processors, traders and consumers.

### Partners

Institut fir biologesch Landwirtschaft an Agrarkultur Luxemburg (LU)

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Fonds National de la Recherche

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