RÉPUBLIQUE FRANÇAISE
Liberté Égalité Fraternité

INRAE

AGRIBIOLEG

CONSORTIUM
2020-2022

The impact of nitrogen resources on the potential of legume species, and their integration into agricultural systems at different scales

Coordination
Pietro Barbieri,
UMR ISPA
pietro.barbieri@
agro-bordeaux.fr

Keywords
Nitrogen
Legume crop
Modeling
Systems
Sectors

The ongoing expansion of organic agriculture (OA) may find itself confronted with a significant lack of nitrogen resources necessary to fertilize crops, a gap that could be filled by increasing the area planted with legume crops.
However, the development of legume crops is only viable if they have outlets on the market.
This project brings together a panel of experts to:

- identify the levers and the spatial and temporal conditions for the enhanced integration of legumes into agricultural systems at different scales;
- examine the consequences of this integration on nitrogen supply, crop behavior and sector organization;
- mobilize the tools and databases available to assess the contribution of legumes to the development of OA.

Contact METABIO
metabio@inrae.fr

Participating INRAE units

AGIR, Toulouse
Agroecology, Dijon
Agronomy, Grignon
Herbivores, Clermont-Ferrand
IGEPP, Rennes
ISPA, Bordeaux
LEVA, Angers

Partners

FiBL, Switzerland
ISARA, France

To achieve these objectives, this consortium will call upon the expertise of researchers from different domains: eco-physiology, agronomy, plant health, modeling, biogeo-chemistry, livestock production, and the economics of relat-ed sectors and organizations, in order to:

o build a future project that will make it possible to assess the different scenarios for increasing the use of nitrogen-fixing legume species;

o draw up a scientific overview of the symbiotic fixation capacity of the different agricultural species in OA, depending on their growth and pedoclimatic conditions.

A European partnership (FiBL Switzerland) will provide addi-tional expertise in terms of the sustainability of food sys-tems in OA as well as enhanced value for the construction of the future project.

Contact METABIO
metabio@inrae.fr