



**Soil: fertility, biological life  
and fighting against erosion**



**AGRI  
Innovation** summit 2019

## Operational Group

### **GASCOGN'INNOV: REDESIGN OF VITICULTURAL SYSTEMS TO IMPROVE BIOLOGICAL SOIL QUALITY AND SOIL CONSERVATION IN GASCONY.**

GASCOGN'INNOV : RECONCEPTION DE SYSTEMES  
VITICOLES POUR L'AMELIORATION DE LA QUALITE  
BIOLOGIQUE ET LA CONSERVATION DES SOLS EN  
GASCOGNE



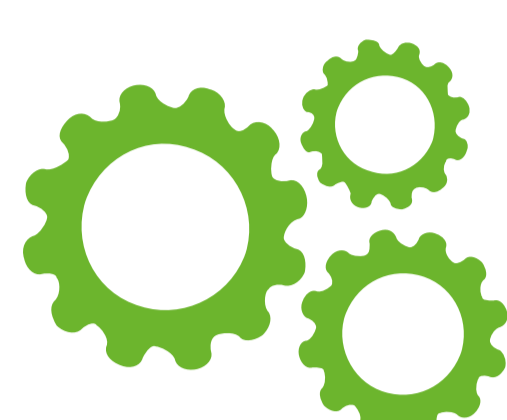
## Calendar

Start: 01/01/2017  
End: 01/01/2022



## Budget

Total amount:  
€419,812



## Practical problem

GASCOGN'INNOV aims to allow an efficient  
appropriation of innovative tools to assess the  
biodiversity and the biological functioning of  
vineyard soils



## Partners

IFV, Agriculture Chamber Gers, Les Bios du Gers  
(organic group), Plaimont and Val Gascogne  
(cooperative), LPA Riscle (agriculture school), 12  
farmers

## Objectives of the project

- Acquisition of references on the impact of viticultural practices and systems on the soil biological from a dynamic way ("Is my viticultural system improving or decreasing the quality of my soil?")
- Construction and testing of a methodology to integrate information provided by the soil biological functioning indicators to manage farming systems, and ultimately to be used by advisers.

## Main activities

The GASCOGN'INNOV project will focus on providing farmers and advisors with new tools based on the latest research advances in soil biology in order to support their decision and help them to promote sustainable cropping systems. The selected soil quality indicators are: microorganisms (bacteria and fungi abundance and diversity), nematofauna (abundance and diversity), macrofauna (earthworms' abundance and diversity), physico-chemical characteristics, soil structure assessment and degradation rate of organic matter.

## Expected results

Improvement of agricultural advice by providing the methods and tools necessary to integrate the biological dimension of soil into reasoning. Initiation of a management of cropping systems to preserve soil properties and functionalities. Promotion of the implementation of agro-ecological practices: integration of service plant cover, organic matter inputs, reduction of herbicides, thanks to information acquired on the technical soil conservation routes tested. Characterization of the added value provided by bio-indicators in understanding agro-ecological processes and predicting the evolution of the impact of cropping systems.

## Results so far/first lessons

The 15 plots were characterized in 2017 in terms of biological functioning. The relationships between viticultural practices and soil quality are still being analyzed. Overall, nearly half of the plots have good biological fertility. The results are more mixed in terms of biological heritage: one third of the plots are in a critical state.

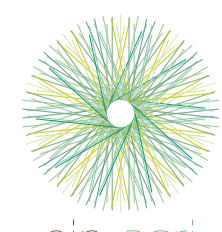
## Who will benefit

Wine-growers and wine advisors, Soil bioindicator designers and laboratories, Civil society as GASCOGN'INNOV aims to promote agricultural practices more respectful of environment (soil and water quality).

## Supported by:



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