

# Consortium

Coordinator:



It is a spin-off of the Università Cattolica del Sacro Cuore born in 2008 with the mission to increase the value of research by transferring the technological innovation to practical agriculture at national and international level.  
**www.horta-srl.com**

Partner:



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore

It is the largest Italian academic Institution, counting 5 campuses, 12 faculties and more than 40 thousand students. Faculty of Agriculture, food and environmental sciences has its campus in Piacenza and was established in the academic year 1952-53.  
**www.unicatt.it**



Sant'Anna  
School of Advanced Studies - Pisa

It is a public University specialized in applied sciences which aims to pave innovative pathways in education and research, responding to the modernization and innovation of society itself.  
**www.santannapisa.it**



ART-ER  
ATTRACTIVENESS  
RESEARCH  
TERRITORY

It is the Emilia-Romagna Consortium Company created to promote the sustainable growth of the region through the development of innovation and knowledge, the attractiveness and internationalization of the territorial system.  
**www.art-er.it**



www.agroservicespa.it

It is one of the leading plant breeding company (mainly bread and durum wheat, barley, oat, pea, sunflower, alfalfa, chickpea and faba bean) in Italy and in other European countries.  
**www.agroservicespa.it**



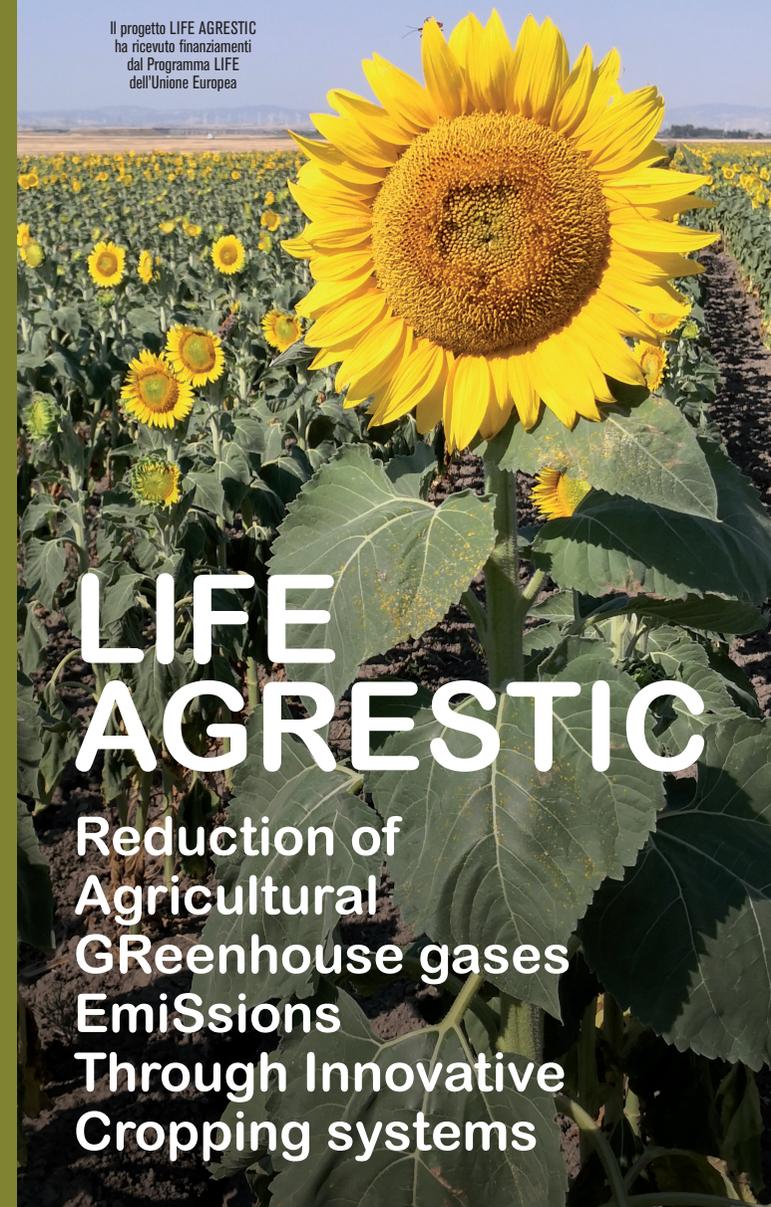
It is a new company of the Tecniche Nuove Group, which includes some of the leading technical headlines in the specialized publishing market, and it works in the agrofood sector under the Edagricole brand.  
**www.edagricole.it**

[www.agrestic.eu](http://www.agrestic.eu)

[info@agrestic.eu](mailto:info@agrestic.eu)



Il progetto LIFE AGRESTIC ha ricevuto finanziamenti dal Programma LIFE dell'Unione Europea



# LIFE AGRESTIC

Reduction of  
Agricultural  
Greenhouse gases  
Emissions  
Through Innovative  
Cropping systems

The **LIFE AGRESTIC** project is part of the Priority Area **Climate Change Mitigation - LIFE Climate Action 2014-2020**.

It promotes the adoption of **innovative and efficient cropping systems**, with a high potential for climate change mitigation. It contributes to the dissemination of **innovative visions and tools** for a more efficient and climate friendly agriculture.



## The main activities

**Test of innovative and efficient cropping systems (ECS)**, in terms of greenhouse gas emissions management, based on the introduction of legumes (pea, chickpea and lentil) and catch crops in a four-year rotation cycle. ECS are tested in three demonstration sites (Emilia-Romagna, Tuscany and Puglia) and compared with conventional farming systems (CCS).  
*All cultivation systems data are collected for analysis all over the three growing seasons (2019-20; 2020-21 and 2021-22).*

*EMILIA-ROMAGNA: ECS rotation with pea, durum wheat (with catch crop) and tomato, compared with CCS rotation with corn, durum wheat and tomato.*  
*TUSCANY: ECS rotation with chickpea, beer barley (with catch crop) and sunflower, compared with CCS rotation with corn, barley and sunflower.*  
*PUGLIA: ECS rotation with lentils, beer barley (with catch crop) and sunflower, compared with CCS rotation with durum wheat, barley and sunflower.*



**Recovery, characterization and multiplication of local and rare varieties / lines of legumes and catch crop** in order to identify the most promising ones in terms of agronomic and environmental performance.  
*Three seasons of tests for the evaluation of the lines and the multiplication of the seed in purity.*



**Development of an innovative Decision Support System (DSS)** for a more efficient management of crop systems.  
*Development of models, algorithms and new functionalities for a more sustainable crop management and for climate change mitigation.*



**Detection of greenhouse gas emissions from soil (CO<sub>2</sub> e N<sub>2</sub>O)** thanks to a prototype for the real time measurement.  
*The prototype is installed in two demonstration sites and it already monitors the emissions from ECS and CCS.*



**Valorisation of climatic and environmental performances achieved.**  
*Development of a product label which certifies the adoption of ECS systems and creation of schemes for PES (Payment for Ecosystem Services).*



**Evaluation of the project's replicability in other European countries.**  
Networking activities with Universities of France, Grece, Romania and Hungary.



**Involvement of stakeholder** in the project activities co-development.