

MORE INFORMATION

If you are interested in our project, follow us on www.resolve-organic.eu or contact the ReSolVe team:

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ReSolVe group at the kick off meeting in March 2015



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REstoring optimal
SOil functionality
in degraded areas
within organic
VinEyard

European research projet
2015-2018



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CONTEXT

In both conventional and organic European vineyards, it is not rare to have delimited areas characterized by problems of decreased grapevine performance (in terms of growth, disease resistance, grape yield and quality). These problems are very often related to sub-optimal soil functionality, due to various causes such as poor organic matter content and plant nutrient availability, imbalance of some element ratios (Ca/Mg, K/Mg, ...), pH, water stress, soil compaction or scarce oxygenation, and soil copper toxicity.

Several agronomic techniques, following organic farming rules, have been used for years to increase soil fertility. To what extent can wine-growers use these techniques to restore soil fertility in such degraded areas?



AIMS OF THE PROJECT

ReSolVe is a transnational and multidisciplinary research project, aiming at testing the effects of the following organic agronomic strategies to restore optimal soil functionality in degraded areas within organic vineyard:

- organic compost adding,
- green manure with winter legumes and cereals,
- permanent cover crops managed as mulch.

Effects of these soil treatments will be evaluated on soil physicochemical and hydrological properties, soil ecosystemic services providers and provisioning, vine root microbiology, and grapevine growth and yield.

ReSolVe also aims to increase the concern of soil quality degradation in viticulture, as well as to disseminate information about best organic practices to restore soil functionality in vineyards.



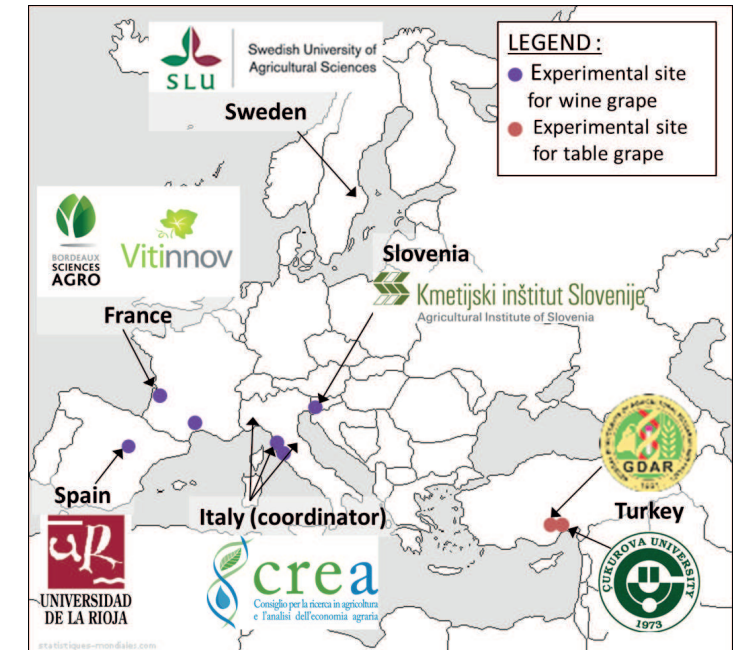
EXPERIMENTS AND ACTIONS

8 partners from 6 countries are involved in the ReSolVe project.

Research activities are conducted on both wine and table grapes in 24 experimental plots distributed in 8 sites (3 plots per site).

This 3-year project started on 1st March 2015.

The experimental vineyards were characterized in 2015. Soil restoration techniques are implemented since autumn 2015 and their effects will be assessed in 2016 and 2017.



The 3 restoration strategies are applied on each experimental plot and evaluated according to standardized common protocols. Measurements relate to:

GRAPEVINE:

vine vegetative growth, water stress, yield components, grape quality (sugar content, acidity, anthocyanins...)



SOIL PROPERTIES:

soil profiles, physicochemical and hydrological analysis (carbon and nitrogen content, humidity, pH...)



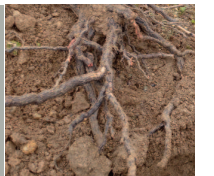
SOIL ECOSYSTEM:

mesofauna and micro-organisms biodiversity (service providers), biological activity (service provisioning)



RHIZOSPHERE:

vine roots related microbial diversity (bacteria, fungi)



Protocols and outcomes of ReSolVe project will be made available to organic wine-growers and conventional ones, the scientific community and stakeholders. A large panel of communication means will be used: a dedicated website, articles, congress presentations, guidelines on vineyard ecosystemic functioning assessment and on the restoration techniques. Training workshops and technical events will be organised in each participating country.