

P63 Core Organic Plus Project: ReSolVe – Restoring Optimal Soil Functionality in Degraded Areas within Organic Vineyards

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Soil erosion and improper land preparation methods present a problem in organic vineyards, where compensating measures, for example with externally introduced fertilizers, are not permitted. As a consequence, vine health and grape production and quality is often negatively influenced, although problems typically occur only in parts but entire vineyards. The developing problems can be related to soil compaction and oxygenation, poor organic matter content, plant nutrient availability, and water deficiency.

The *ERA-NET Core-Organic plus* project *ReSolVe* (that started in March 2015) is a transnational and multidisciplinary research project aimed at testing the effects of selected agronomic strategies for restoring soil functionality in degraded areas within organic vineyard. Organic vineyards were selected in 5 countries (Italy: Chianti hills and Maremma plain, Tuscany; France: Bordeaux and Languedoc; Turkey: Adana and Mersin; Spain: La Rioja; and Slovenia) and degraded areas within these vineyards will be treated with *organic soil recovering methods* including treatments with compost, green manure with winter legumes, and dry mulching with cover crops. The strategies will be evaluated according to their efficiency to improve plant health and root growth, grape yield and quality, and effect on soil ecosystem services.

The project involves 9 research groups in 6 EU countries (France, Italy, Slovenia, Spain, Sweden, and Turkey) and experts from different disciplines such as soil science, ecology, microbiology, grapevine physiology, viticulture, and biometry. We will disseminate restoration techniques and the monitoring methodologies developed and tested during the *ReSolVe* project in guidelines for vine-growers. The research group in Slovenia will focus on the characterization of ecological service providers, fungi and bacteria, from rhizospheres before and after restoration techniques were performed.

Keywords: viticulture, soil functionality, biodiversity, soil management, ecological service providers

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