

Understanding and Improving the Sustainability of Agro-ecological Farming Systems in the EU



In viticulture, the general dependency on external inputs such as fertilizers and pesticides is high. How to reduce this dependency through agro-ecological practices while maintaining economic viability of farms? The UNISECO project aimed at investigating this question with the help of a regional network of local cooperatives of farmers (CUMA, cooperatives for the use of agricultural equipment).

RESEARCH FINDINGS

To implement agro-ecological practices, five barriers have to be overcome:

- 1) Economic barrier. Excepted for organic farmers, there is no positive price premium for farmers engaged in agroecology.
- 2) Governance barrier, there is no link between (a) agri-food value chain actors; (b) authorities and public administrations promoting AE transition; and (c) technical advice for farmers.
- 3) Technical barrier. Reducing the use of pesticides or chemical fertilizers is not so easy and sometimes impossible particularly in tight row planted vineyard and/or in steep slopes that require specific and expensive machineries.
- 4) The insecurity related to an agro-ecological approach of vine diseases and pests. A management based on ecological services is more risky for the yield and the quality of grapes. There is no "turnkey" solution to ensure the success of this transition.
- 5) The last barrier is related to climate change (drought, hazards like hail, frost in spring)

A majority of interested farmers intend to start implementing practices such as: green manure to reduce external fertilizers use; using combined cropping and mechanical weeding to reduce pesticides use (wine shrubs and other crops); Testing specific materials for slopes (i.e. rotary spade) to prevent erosion and reduce water evaporation.

These emerging practices need to be encouraged and intensified.

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Vineyard
Organic production
(DEMETTER Label)
Old grape varieties

POLICY RECOMMENDATIONS

As the main barrier is an economic one, there is a need to support::

- · New sustainable food systems based on agro-ecological practices;
- Labelling policy including agroecological practices in product specifications
 Other policies will help to promote the adoption of agroecological practices.

Broadening existing policies

Agri-environmental measures: support to use of cover crops and green manure in vineyard; compensating the loss of income in the early years (3 to 5 years) linked with insecticides and fungicides suppression; support for crop diversification. **Landscape management - Agro-environmental measures.** The challenge is to promote agro-ecological practices at the landscape scale and not only at the field scale to amplify their impact.

Support to organic farming. (both for the conversion period and after this period). **Diversification of on-farm non agricultural activities** Incentives for other income relevant activities (agro-tourism)

Creating new policies

- -Support for vineyard restructuring Payments for investments. Support should be targeted towards parcels where the planting of the vines prevents the reduction in the use of herbicides.
- -Support of circular economy: collective composting platform, exchanges of organic fertilization and renewable energy generation, reintegration of distillery waste or other green residues into the vineyard plots.

ABOUT UNISECO:

UNISECO is a European research project aiming to develop innovative approaches to enhance the understanding of socioeconomic and policy drivers and barriers for further development and implementation of agro-ecological practices in EU farming systems.

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