

ProVino

Evaluating non-chemical methods for suppressing or delaying fungal epidemics in vineyards.



Inspiration

Viticulture is an important industry in the Moselle region of Luxembourg. Growing grapes for high-quality wines with a low use of pesticides is particularly challenging, because non-chemical control methods that are used in agriculture such as annual crop rotation or tillage systems that interrupt the life cycle of pests and pathogens cannot be used in viticulture due to the perennial character of the crop. Furthermore, the humid climate of the Moselle valley favours the development of fungal plant pathogens that pose a threat to the crop and in turn to wine quality virtually every year. A decrease in pesticide use is desirable to reduce production costs as well as the risks associated with the potential side effects of pesticides on non-target organisms.

Innovation

The ProVino project will evaluate non-chemical methods for suppressing or delaying fungal epidemics in vineyards for their potential to partly replace fungicides. Studies will be carried out with a focus on innovative cultural control methods that facilitate the drying of leaves and berries, thereby shortening the periods with sufficient humidity for fungal growth, and on methods that provoke plant responses that are favourable for delaying epidemics.

Impact

The ProVino project will result in:

- modifications in vineyard management that help to save pesticides
- building blocks for the implementation of European and national programmes focused on reducing the risks of pesticide use
- the identification of existing and the development of new management practices that help to safeguard or improve wine quality
- forecast models and decision support tools for diseases that allow growers to better organise their workflows and achieve optimum efficacy of control actions
- publications on locally interesting findings and techniques in applied journals and publications on generally interesting findings and techniques in international journals
- identification of vine pathogen metabolites with potential applications beyond viticulture

Partners

University of Florence (IT) , Agroscope (CH) , University of Natural Resources and Life Sciences Vienna (AT) , School of Wine- and Fruit Growing in Krems (AT) , State Viticulture Institute Freiburg (DE) , Pennsylvania State University (US) , Federal College and the Federal Office for vineyards and orchards in Klosterneuburg (AT) , Hochschule Geisenheim University (DE) , Dienstleistungszentren Ländlicher Raum Rheinland-Pfalz (DE)

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