Inspirational ideas

NEWSLETTER APRIL 2020

Vineyard app for plant protection

APPVID: Digital decision support tool to reduce application of pesticides and increase their efficiency

It is important to improve the sustainable use of plant protection products, reducing the risks and impacts of pesticide use on human health and the environment. Spanish Operational Group APPVID has developed a mobile application to enable growers to access unbiased decision support for phytosanitary applications in vineyards.

The aim of the APPVID project was to develop a digital support tool which provides advice to the grower about the optimal timing for phytosanitary treatments. The app helps in two very clear ways. First by reducing applications as it integrates information on the vineyard obtained from sensors, observations and other sources to give precise advice on timing and quantity for applications for disease control. Secondly, it also increases the effectiveness of disease control measures, as the app can give reports on the health status of the vineyards in real time. Reducing applications actually also leads to a reduction of pesticides which run off into the environment and also to emissions from the farm machinery, which are used less often.

The project ran between 2016 and 2018, bringing together different types of organisations as partners, representing research and practice. They felt that it was important to create and establish links between the wine-producing and research sectors in order to transfer knowledge to adapt into useful tools for growers.

In the first phase of the project, meteorological stations (Cesens®) were installed on 9 experimental vineyard plots. Each had several sensors recording air and ground temperature values, relative humidity, solar radiation, and wind direction and speed. The partnership then defined the needs of the application: location of vineyard plots and characteristics, the environmental and climatic parameters and relevant historical data.

In the second phase, disease data for mildew, powdery mildew and botrytis diseases were collected. Male moth individuals of the *Lobesia botrana* cluster were also captured by traps using insect pheromones . The disease condition data was analysed and a model to estimate disease risk in the vineyard was elaborated. In parallel, the different components for the mobile application were developed: meteorological data, risk estimation module, health treatment data recorded from field application, consultations on risks and the possibility of linking with specific software.

Finally, the mobile application was developed and made available: **www.appvid.eus**.

funded by European Commission

The project partners have made sure that the mobile application will continue to evolve automatically with climatic and environmental changes.

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More information
https://ec.europa.eu/eip/agriculture/en/find-connect/projects/2016-002-appvid-gesti%C3%B3n-de-enfermedades-en-vi%C3%B1edo

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Did you know there has been an EIP-AGRI Focus Group on **Diseases and pests in viticulture**? Read the report which looked at how to increase resilience of grape vines to pests and diseases and support the productivity of the sector in sustainable ways?