



*Redefining Pest Management - a Holistic Approach*

## Practice Abstract N° 16

### **OPTIMA DSS for the detection of plant diseases in vineyards, carrots and apples**

OPTIMA DSS is a fully functional Decision Support System that operates as a valuable tool in the hands of European producers for predicting disease outbreaks (5-day prediction) regarding 3 main plant pathogens that cause severe economic losses to vineyards (Downy mildew), apples (Apple scab) orchards and carrots (Alternaria leaf blight) by generating qualitative and quantitative degradation of the agricultural goods produced. The DSS is freely accessible in <http://dss.optima-h2020.eu/> and functions by exploiting data from weather services' networks. The DSS allows a better understanding of the infection risk based on the optimum conditions for diseases' early symptoms occurrence in order to properly and timely control the potential outbreaks and finally lead to a significant reduction of chemical PPPs applied. The map presents several areas in different coloring, located in Spain (Zaragoza region), France (Bordeaux region), Italy (Piemonte region) and Greece (Thessaly, Evia and Attica regions). The color scale indicates the four risk levels: green for no risk; yellow for low risk; orange for medium risk; and red for maximum risk. Furthermore, users have the ability to select the "Ideal spraying" button for displaying the appropriateness of the meteorological conditions for spraying application (5-day prediction) on a specific selected time-point. This holistic IPM approach is targeting to lower chemical inflows in food production chain, lower residues and reduce impacts on human health and the environment.



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