

## NEW STRATEGIES FOR BOTRYTIS BUNCH ROT CONTROL FOR A SUSTAINABLE VITICULTURE

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Grapevine (*Vitis vinifera* L.) is cultivated throughout the world in a wide range of climates, from temperate to tropical ones. It's highly susceptible to fungi, being *Botrytis cinerea* (Bc) among the most important pathogens causing bunch rot (BR), a disease mostly observed on ripe berries.

To date, the defence against Bc is still guaranteed by an intensive use of chemical fungicides. Consequently, the development of alternative strategies for Bc control with benefits both for human health and the environment is of high importance and a priority. In the last years, the concept of "integrated defence" against Bc is increasingly widespread, using defence protocols integrating agronomic control tools with interventions based on synthetic fungicides and natural antagonists to be carried out in the periods of higher susceptibility.

In this project, a molecular method for monitoring Bc load in the field was set-up in order to estimate the colonization by Bc of grapes of *V. vinifera* cv Sangiovese and Trebbiano at different locations (hilly site vs plain site) and cultivated applying different integrated defence protocols.

Samples were collected at three different developmental stages (full bloom, bunch enclosure and veraison) from replicated plants of different treatments and analyzed for the presence of *Bc* at the DNA level. The correlation between molecular data with *Bc*BR severity and incidence data at harvest in the different theses for the two cultivars are here presented.

The molecular diagnostic method will be useful to quantify *Bc* load at the early season in order to potentially predict *Bc*BR severity at harvest, and also to evaluate the effect of disease management protocols adopted to reduce *Bc* inoculum.