

# ABSTRACT BOOK FOR ORAL AND POSTER PRESENTATIONS

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## Effects of treatment based on spirulina (*A. platensis*) on Pinot Noir vines grown in pots with two different water regimes

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In the current climatic scenario, the *Vitis vinifera* that grows in the Mediterranean basin is undergoing the effects of climate change for both qualitative and quantitative aspects. In addition, the experts' climatic forecasts anticipate further thermic increases and decreases of rainfalls in the next decades, that are going to severely affect the production and quality of the grapes. In order to mitigate the effects of this climate change on the grapevine, it is worth to evaluate short-term adaptation strategies. Among these strategies, biostimulant treatments have proved to be particularly efficient.

Therefore, the purpose of this work was to analyse and evaluate the effects of a biostimulant preparation, the "œspirulina" (*Arthrospira platensis*) extract, on *Vitis vinifera* L. Pinot Nero plants grown in pots with two different water regimes, water stresses (WS) and well watered (WW).

To evaluate the effects, we analysed both the major physiological parameters of the plants (leaf gas exchange, indirect content of chlorophyll, chlorophyll fluorescence and water potential) and the quali-quantitative parameters of grape (technological properties and phenol content), focusing on comparison of differences between treated grapevines (SPIRU) and control grapevines (CTRL).

The results obtained by plants under WW regime demonstrated as some of the physiological parameters (photosynthesis, extrinsic water use efficiency - WUE<sub>e</sub> - and water potential) were influenced by treatment, while others parameters (stomatal conductance, transpiration, indirect content of chlorophyll, and chlorophyll fluorescence) were not influenced. Moreover, the grape weight increased by 14% in the treated plants. Transpiration and WUE<sub>e</sub> were influenced under WS regime. Moreover, the grape weight increased by 11%, conversely, sugar content, pH and extractable anthocyanins decreased.