VINEYARD MANAGEMENT AND MICROBIAL ENDOPHYTES. THE IMPACT OF IPM ON PLANT-ASSOCIATED MICROBIAL COMMUNITIES

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Endophytic microorganisms dwell in plants both intra- and extra-cellularly without causing disease symptoms. The mechanisms that govern the presence of endophytic bacterial and fungal taxa inside plants are not yet known, and the exploration of community fluctuations when the plant's environment is altered, is still in its infancy. Previously we have demonstrated that grapevines organic and IPM farming harbour distinct fungal endophytes. Here we show that, similarly to what previously was observed with fungal communities, bacterial endophytes also vary with farming style. We also show the fluctuations observed in communities of endophytes from organic and I.P.M. treated grapevines using Roche 454 pyrosequencing. A mixed greenhouse and field setup is adopted to dissect the mechanisms underlying community shifts.