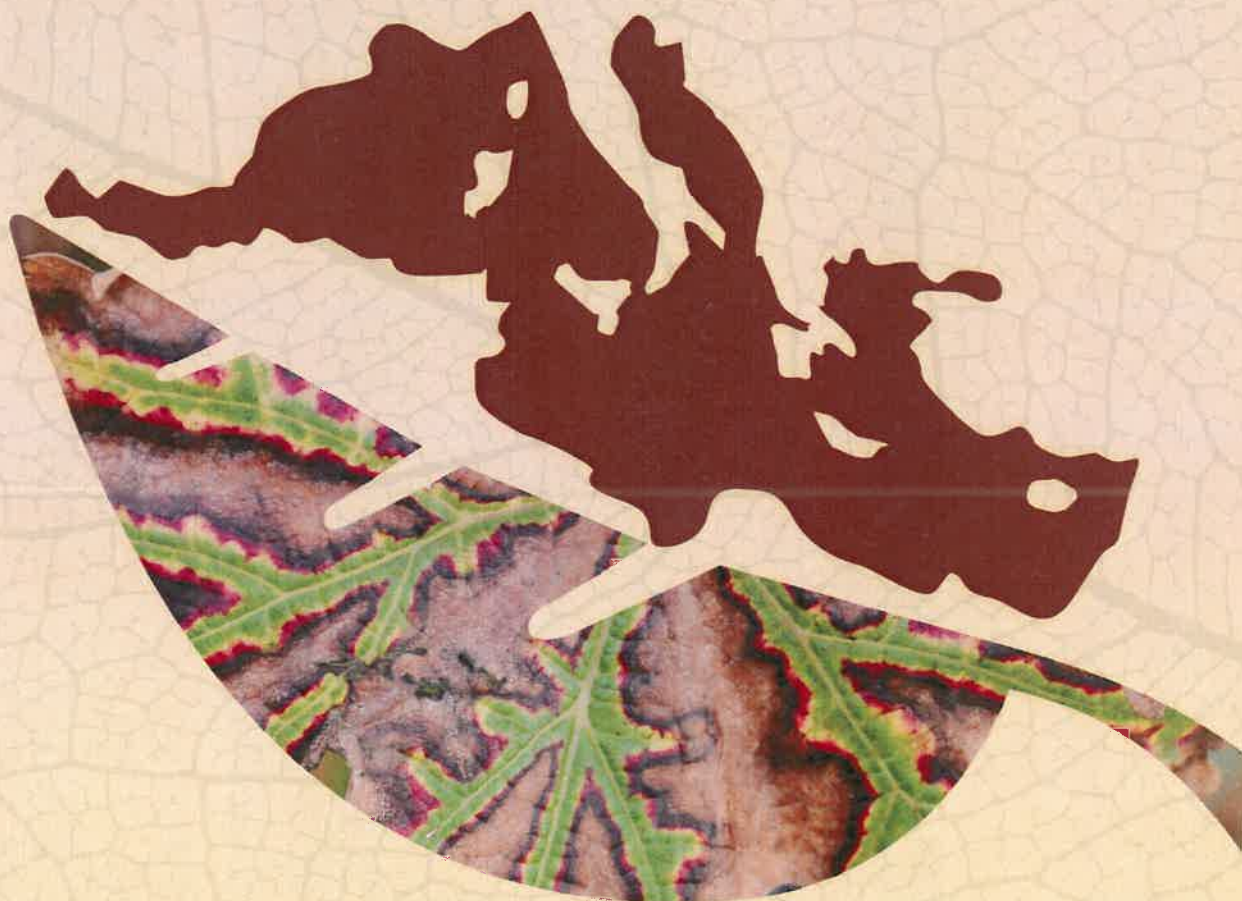




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PLANT HEALTH SUSTAINING MEDITERRANEAN ECOSYSTEMS

ABSTRACTS BOOK



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P.132 Fungal endophyte communities in olive fruits: effect of maturation index and anthracnose incidence. F. MARTINS^{1,2}, J.A. PEREIRA¹ and P. BAPTISTA¹. ¹CIMO / School of Agriculture, Polytechnic Institute of Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal. Email: pbaptista@ipb.pt. ² University of León, Department of Engineering and Agricultural Sciences, Av. Portugal, nº 41, 24071 León, Spain

Olive anthracnose, caused by different species of *Colletotrichum* genus, is considered as one of the most economically harmful fruit disease of olive crop worldwide. In Trás-os-Montes region (Northeast of Portugal), although the presence of the pathogen has been reported on olive orchards in almost all areas, lower levels of incidence were observed in specific areas. This work evaluated the diversity of endophytic fungi inhabiting fruits of the susceptible-anthracnose cultivar Madural, in olive groves from areas of high and low anthracnose incidence, in order to evaluate differences in the endophytic community composition. For this, fungi were isolated from symptomless olive fruits at three different maturation index (MI). The isolates were identified by rDNA sequencing. Overall, the frequency of colonization and abundance of endophytes was higher in areas with high anthracnose incidence (12.4%; 78) when compared to areas with low incidence (7.3%; 46). Despite this, the composition of fungal communities in both areas was very similar, being the genera with the greatest abundance *Trametes* (33%), *Alternaria* (43%) and *Neofabraea* (26%). Over fruit maturation, the frequency of colonization, abundance and diversity of endophytes increased significantly and progressively up to 16.0-, 6.0- and 8.0-fold, respectively. Although endophytic community of the three MI was found to overlapped, several fungal genera preferred either olives from MI2 (e.g. *Apodospora*, *Hyalodendriella*, *Pyrenochaeta*), or from MI3 (e.g. *Mollisia*, *Ulocladium*) or MI4 (*Colletotrichum*, *Epicoccum*). In addition to providing insights into fungal endophyte community structure, our survey provides candidates for further evaluation as potential management tools against olive anthracnose disease.

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P.133 Endophytic and epiphytic fungal community associated to olive tree differ in antagonistic activity against *Pseudomonas savastanoi* pv. *savastanoi* . T. GOMES^{1,2}, J. A. PEREIRA¹, T. LINO-NETO², P. BAPTISTA¹. ¹CIMO/ Polytechnic Institute of Bragança, School of Agriculture, Campus de Santa Apolónia, 5300-253 Bragança, Portugal. pbaptista@ipb.pt. ²Biosystems & Integrative Sciences Institute (BioISI), Plant Functional Biology Center (CBFP), University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

The Olive knot (OK) caused by the *Pseudomonas savastanoi* pv. *savastanoi* (Psv) is an important disease, causing severe damages and yield losses in olive trees worldwide (*Olea europaea* L.). In a previous study we have isolated this bacterium from the phyllosphere of olive tree, together with many fungal species. In these complex communities, microorganisms compete with each other for space and resources, promoting survival of the best-adapted individuals. This has prompted interest in the exploitation of these microorganisms for OK control. In this study, 48 fungal species from the endo- and epiphytic communities of olive twigs were screened for the growth inhibition of the phytopathogen Psv under in vitro conditions. The time course of interspecific interactions (24, 48, 72 and 144h) was studied in potato