



Geographic and temporal population dynamics of the olive anthracnose pathogens

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Abstract: Portugal is likely the country in the world where olive anthracnose is most relevant. The causal agent was first identified here in 1899 by J. Veríssimo de Almeida and the first record of symptoms compatible with olive anthracnose was produced by the Arab agronomist Bū'l-Jayr in the XIth century in South-western Iberia. Mild and wet autumn conditions (due to Atlantic exposure) and the widespread cultivation of the highly appreciated but highly susceptible 'Galega Vulgar' are referred as factors explaining high disease incidence and severity in the country. We now know that the causal agents are genetically diverse and cluster in different species of *Colletotrichum*, a knowledge that has in part contributed to the reformulation and update of the taxonomy of *Colletotrichum*, which in turn has contributed to a more sustained knowledge of olive anthracnose aetiology. The species *C. nymphaeae* is the most frequent in Portugal, but it is rarely associated to olive anthracnose elsewhere. In turn, *C. godetiae* is common throughout the Mediterranean basin but in Portugal it is only frequent in the North-east of the country (Trás-os-Montes). A third species, *C. acutatum*, common in the southernmost region (Algarve), is appearing with increased frequency in other parts of the country as well as in other Mediterranean countries, where it even seems to be replacing *C. godetiae* as the most common pathogen. Several other species are also identified, but are less frequent. Comparative studies have depicted *C. nymphaeae* and *C. acutatum* as the most virulent species towards olive fruits, along with *C. theobromicola*, a common olive pathogen in Australia but that has recently been associated to olive anthracnose also in South America. Any of these species occur on multiple hosts and affect several crops and thus there is potential for cross-infection to and from olive. In this presentation we will update the knowledge on the population dynamics of the olive anthracnose pathogens, bearing in mind the current taxonomic framework in *Colletotrichum* as well as the host range, life styles and geographic distribution of each species, in order to foresee future population dynamics and to anticipate better informed protection strategies.

Key words : olive anthracnose, *Colletotrichum*, aetiology

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