

Title Distribution of *Monilinia* species on peaches and nectarines in Ebro valley, Spain.

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Abstract

Monilinia laxa and *M. fructigena* were the known causal agents for brown rot in peaches and nectarines in Spain until *M. fructicola* was reported in Ebro Valley, Spain, in 2006. *M. laxa* was isolated in 85-90% of brown rot fruit, followed by *M. fructigena* isolated in 10-15%. Post-harvest losses are typically severe, especially when conditions are favourable for disease development, in some cases reaching 80-85%. To determine the distribution of each *Monilinia* species in Ebro Valley, more than fifty peach or nectarine orchards were selected in five areas in 2006 and 2007. Between 400-500 brown rot fruit were removed from orchards each year. Over 700 isolates were identified by PCR using the molecular specific primers IlaxaS and IlaxaAS for *M. laxa*, IGenAS and IGenAS for *M. fructigena* and IColaS and IColaAS for *M. fructicola*. *M. laxa* was the species most isolated, followed by *M. fructicola* and *M. fructigena*. The distributions and epidemic frequencies of the species were different between areas and years. The spatial relationships will be discussed. In addition, phenotypic characterization of the isolates of each species was also carried out, analyzing their aggressiveness and their resistance profile to fungicides.