Monitoring conidial density of *Monilinia* spp. on peach surface in relation to brown rot development in orchards

M. Villarino, I. Gell, P. Melgarejo, A. De Cal, C. Casals, N. Lamarca, J. Usall, J. Segarra

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Abstract

Monilinia spp. is the most important cause of post-harvest brown rot in peaches and nectarines in Spain. Conidia produced in overwintered tree fruit mummies, and necrotic twigs infected by *Monilinia* spp. acted as primary inoculum sources and caused scarcely blossom blight and flower, and rather brown rot on fruit. Post-harvest losses are typically more severe, especially when conditions are favourable for disease development, in some cases reaching losses of 80-85%. When microclimatic conditions are unfavourable, infections may remain latent until they become favourable for disease expression, which finally leads to fruit rot. To evaluate the effect of surface conidia concentration on the incidence of latent infection and brown rot of peaches, seventeen field experiments were performed in commercial orchards located in Lleida (Spain) over six growing seasons from 2002 to 2007. There was a significant relationship between the numbers of conidia on peach surfaces and the incidence of latent infections, with the incidence of brown rot at post-harvest. The importance of conidia on fruit surface on brown rot development is discussed.