

## AVOCADO ROOT ROTS IN SOUTHERN SPAIN: REVISION AND CURRENT INVESTIGATION A-198

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The study carried out by our team in the last sixteen years is summarized in this work. In the period 1986-2003, a total of 1379 samples from avocado roots of 481 orchards, in the provinces of Málaga and Granada were analysed.

The fungi isolations and pathogenicity tests were carried out and *Phytophthora cinnamomi* and *Rosellinia necatrix* were identified initially as causal agents of these root rots (RR). Currently the incidence percentage of each pathogen, on the total of orchards visited over sixteen years of sampling, is 35% for *P. cinnamomi* and 39% for *R. necatrix*. These diseases are considered as the most important in avocado crops in southern Spain.

Studies of virulence as well as the morphological and cultural characteristics of these pathogens and an integrated control by different physical and chemicals methods have been carried out. The effectiveness of the solarization in the physical control of the RR in commercial orchards of this area has been demonstrated and, additionally, a relative control in experiments, under greenhouse and field conditions, with different chemicals has been obtained.

Currently a new line of investigation on biological control of these diseases incorporating fungi and bacteria antagonists to RR has been initiated and an evaluation program of avocado material from different origins to select rootstocks tolerant to the cited pathogens is being developed.