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SELECTION OF ANTAGONISTIC BACTERIA TO *ROSELLINIA NECATRIX* FOR BIOLOGICAL CONTROL OF AVOCADO WHITE ROOT ROT

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Biological control by application of biological control agents (BCA) is an alternative to traditional chemical control, although many problems related to its commercial and practical use have appeared. However, at present, a lot of work is being carried out to select BCA effective against different pathogens for future field application. The objective of this work was the selection of antagonistic soil bacteria and rhizobacteria to *Rosellinia necatrix*.

In Andalucía, south of Spain, the most important diseases in avocado orchards are avocado root rot caused by *Phytophthora cinnamomi* and avocado white root rot caused by *R. necatrix*, whereas in Tenerife (Canary Islands), only *Phytophthora* root rot is important. Therefore, the initial purpose of this work was to perform a double selection of antagonistic bacteria to both *P. cinnamomi* and *R. necatrix*. In order to accomplish this objective, *in vitro* studies with *R. necatrix* and antagonistic bacteria to *P. cinnamomi* isolated from primitive canary forest soils (laurisilva forest soils) were conducted. Simultaneously, we screened some bacteria and rhizobacteria from avocado orchards located in Andalucía for *in vitro* antagonism towards *R. necatrix*.

In *in vitro* studies with *R. necatrix* and *P. cinnamomi* antagonistic bacteria, some bacteria with antagonistic ability against *R. necatrix* were found: *Bacillus polymyxa* strains MAS1 and MAS1' and *Pseudomonas putida* strain PAI7. These strains will be used in the future for bioassays with avocado plants to confirm their antagonism. In addition, antagonistic bacteria and rhizobacteria isolated from avocado orchards and their potential production of antifungal compounds are now being studied.