

## SUPPRESSION OF ROOT ROT IN AVOCADO IN SOIL OF JUJUY, ARGENTINA

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In the Province of Jujuy, Argentina, in some avocado orchards, severely affected by *Phytophthora* root rot, apparently healthy trees were found surrounded by others with high disease incidence (Mexican rootstocks and Hass tops). The objective of this study was to evaluate if their rhizosphere possessed some mechanism to suppress the disease. The rhizosphere of two adjacent plants with soils of similar chemical properties was analyzed, one with symptoms and the other without symptoms. *Phytophthora cinnamomi* was present in the roots of both plants. The addition of *P. cinnamomi* inoculum in amounts ( $1100 \text{ ufc ml}^{-1}$ ) sufficient to cause root rot of Eucalyptus seedlings, permitted evaluating the loss of suppressive activity by sterilization and the transference of the suppressive characteristics. Inoculated lucerne stems were used to determine the effect of the rhizospheric soil on the formation of sporangia and chlamydozoospores. Finally, the microorganism population densities of rhizosphere, phyllosphere and endosphere were estimated by serial dilution. Fluorescent *Pseudomonas*, fungi and *Bacillus* spp. isolated from soils were screened for their ability to inhibit *in vitro* the growth of *P. cinnamomi*. Suppressiveness of biological origin on root rot in avocado caused by *P. cinnamomi* was demonstrated in the rhizosphere from healthy trees. No significant differences were detected when counting microbial population. When evaluating microorganisms of both populations, it was determined that isolations of *Trichoderma* spp. from the rhizosphere of the apparently healthy plant generated a negative interaction with the pathogen inhibiting its growth.