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SUPPRESSIVE ABILITY AGAINST ROSELLINIA NECATRIX OF AGRICULTURAL SOILS AMENDED WITH ALMOND SHELLS

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The use of organic soil amendments to enhance the suppressiveness of natural soils has been proposed as an additional strategy to control plant diseases. Avocado is one of the main subtropical crops in southern Spain and white root rot, caused by the fungus *Rosellinia necatrix*, one of the most serious problems. Previous studies on this pathosystem have shown that application of composted almond shells caused a change in soil microbial communities of both population and functional level. In this work, evaluation of the suppressive capacity of almond shells amended soils have performed. "In vitro" assays using two different susceptible plants, *Persea americana* (avocado) and *Triticum aestivum* (wheat), indicate a clear relationship between soil microbial communities and suppressiveness. Addition of composted almond shells to the agricultural soil resulted in increased suppressiveness against *R. necatrix*, directly associated to microbial components, since suppressiveness was reduced when the soil was pasteurized, and partially recovered when the pasteurized soil was complemented with field soil. Different strains producing antifungal compounds were correlated with suppressiveness by molecular approaches.

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