

Two genotypes of mycorrhizal *Pinus pinaster* respond differently to cadmium contamination

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Fertilization is one of the main anthropogenic sources of Cd accumulation in agricultural soils and when toxic levels have been reached, food crop production is no longer viable. Adequate strategies for the forestation of agricultural metal contaminated sites are of vital importance. The aim of this work was to evaluate the response of two different genotypes of *P. pinaster* (A and B) to Cd contamination and to assess how inoculation with ectomycorrhizal fungi influenced each genotype. Seedlings were exposed to soil contaminated at different levels of Cd. At 30 mg Cd kg⁻¹ non-inoculated genotype A accumulated more Cd in the shoots. At the lowest Cd concentration *S. bovinus* decreased Cd shoot concentration and increased aboveground development in both genotypes. At the highest Cd dosage inoculation with *R. roseolus* decreased Cd concentration in the roots of genotype B whereas the opposite occurred in genotype A. The results from this study suggest that the selection of an adequate combination between genotype and associated mycobionts may be an important biotechnological tool to enhance the efficiency of forestation and phytoremediation processes of degraded land using *P. pinaster*.

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