



Effects of soil disturbance on arbuscular mycorrhizal fungal communities of soil and plant roots

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Soil management through tillage is known to affect the community structure of arbuscular mycorrhizal (AM) fungi. However, it is not understood to what extent that also influences the community of AM fungi that colonize the host crop. This study aims to assess the influence of two different soil management practices (conventional tillage and no-tillage) on the diversity and composition of arbuscular mycorrhizal (AM) fungi communities, both in soil and plant roots. Using terminal restriction fragment length polymorphism (T-RFLP) we found that the number of T-RFs in soils under conventional-till was similar to that observed for no-till. An average of 22.75 T-RFs were detected in roots growing under no-tillage conditions; surprisingly, an average of 27.92 T-RFs were observed growing in roots under conventional tillage conditions. The results suggest that there is no clear influence of soil management on AMF communities. However, further work is clearly required to determine the extent to which AMF genotypic alterations by soil management influences competitive relationships.

Acknowledgements: The first author is grateful to the Universidade da Coruña for a research travel scholarship.