

## ISOLATION AND IDENTIFICATION OF ARBUSCULAR MYCORRHIZAL FUNGI FROM AGRICULTURAL FIELDS OF VIETNAM

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Nowadays environmentally friendly crop production technologies more and more come to the fore, which ensure the reduction of the amount of fertilizer and pesticide while maintaining crop yield and quality. In Vietnam, where more than 50% of population deals with agriculture, it is particularly important to create conditions for modern agricultural technology and to improve crop safety. The arbuscular mycorrhizal (AM) fungi, that form symbioses with the majority of land plant species including a large proportion of cultivated plants, can play a significant role in this process.

In our work we investigated the AM fungal communities in the rhizosphere soils of rice (*Oryza sativa*), maize (*Zea mays*), peanut (*Arachis hypogaea*), croton (*Croton tonkinensis* Gagnep.) and tomato (*Lycopersicon esculentum*) plants originated from Bắc Ninh, Vĩnh Yên and Hà Nội provinces in Vietnam. The presence and richness of the AM fungal community were assessed by extraction and counting of AM fungus spores and by characterization of the isolated strains based on molecular methods.

Our results showed that the Vietnamese red clay sub-tropical soil (acrisol) is rich and diverse regarding to AM fungi. The dominant members of the AM fungal communities in the rhizosphere soils tested belong to the genus *Acaulospora*, except the rhizosphere soil of maize where the vast majority of AM fungal spores belong to the genus *Funneliformis*.

When using AM fungi as inoculum the indigenous AM fungal community cannot be ignored, hence the results of the present work may extend our present knowledge for determining the composition of an efficient inoculum combination of AM fungi, best adapted to the environmental factors and cultivation systems.

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