ECOLOGICAL AND BIOCHEMICAL CHARACTERISTICS OF *TRICHODERMA* STRAINS ISOLATED FROM SERBIAN SOILS

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Fungi belonging to the genus *Trichoderma* spp. are soil borne cosmopolitan species present in different ecosystems with important ecological and biological roles. Their application in various fields of biotechnology and agriculture is based on their diverse beneficial effects. As plant endophytes they are involved in control of plant diseases, and also in the induction of plant tolerance to various biotic and abiotic stresses. Due to the production of different enzymes they can be used in preparations of commercial products, such as biopesticides. However, for their adequate use and application, their identification at the molecular level is of great importance.

Investigations on *Trichoderma* spp. in Serbia were scarce so far. In total 41 isolates which belonged to 9 species were isolated from different soil types, as described previously (Racić et al., 2017). Physical and chemical characterization of the examined soil samples indicates that the richest source of *Trichoderma* species are weakly alkaline soils, with better water availability and higher contents of available K and P. However, metal presence in soil samples and soil microbial characteristics did not affect *Trichoderma* diversity in different soil samples. Selected isolates showed good antagonistic properties against tested phytopathogens *in vitro*, with high biocontrol index (BCI) values. The results of *in vitro* antagonism experiments and API-ZYM tests could be used for the selection of isolates for further *in vivo* investigations.

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