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NEW APPROACHES FOR ASSESSMENT AND IMPROVEMENT OF ENVIRONMENTAL STATUS IN BALKAN REGION:
INTERACTIONS BETWEEN ORGANISMS AND ENVIRONMENT

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May 28-30, 2012.

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[O2]

Genetic variability of *Trichoderma* isolates from the rizosphere of vegetables in agricultural soils

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Species of the genus *Trichoderma* are commonly found free-living fungi in soil and root-ecosystems. It is known that the rhizosphere of agricultural soils is an ideal source of beneficial *Trichoderma* strains with biocontrol potential, as some of the strains showed excellent antagonistic abilities against plant pathogenic fungi. Others are able to improve plant growth, root in particular, promoting drought resistance in some crops.

Genetic variability of *Trichoderma* isolates from the rizosphere of paprika, tomato and carrots in agricultural soils was examined in this study. Isolates were prepared directly from the chopped roots of different vegetables on dichloran-Rose Bengal medium. DNA isolation and PCR amplification of the internal transcribed spacer (ITS1-5.8S rDNA-ITS2) region have been used for the identification of the isolates and for the investigation of their genetic polymorphism. *Trichoderma* isolates were identified based on their ITS sequences with the aid of the programs *TrichOKEY* 2.0 and *TrichoBLAST* available online at the home page of the International Subcommittee on *Trichoderma* and *Hypocrea* Taxonomy (www.isth.info)

While the total number of *Trichoderma* species identified so far in Europe is estimated to be about 100, there is no such data for the soil in Serbia. The plant-beneficial effects of new strains will be evaluated and this method will be used for studying genetic variability of *Trichoderma* isolates in the rizosphere of different vegetables grown on Serbian soils.

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