

BIOCHAR AS AN AUXILIARY AGENT ENHANCING THE POTENTIAL OF PHYTOREMEDIATION

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Abstract

The challenge of the circular economy principles application in the region has stimulated integrated decisions such as biowaste, generated by different economic activities, application as raw material for the biochar and other enrichers' preparation for further soil fertility improvement. Shifting to the circular model in economy with orientation to the sustainable development goals' achievement open the regional perspectives of biodegradable waste utilization, reduction of the expenses for the traditional soil's fertilizer and mitigation of the soil's pollution by heavy metals. Experimental data regarding biochar production by pyrolysis, its chemical and physical qualities assessment as well as its application as the soil's amendment and heavy metals content's determination in cultivated plants are presented in this paper. The results shown that a biochar production temperature and its amount applied to the soil as well as the kind of the cultivated plants can increase the pH of the soil, reduce the some heavy metals concentrations in the drainage water, impact on the bioavailability of the plants and finally to an efficiency of the soil's phytoremediation method.

Keywords: Biodegradable waste, biochar, heavy metals, phytoremediation