INVESTIGATION OF THE INFLUENCE OF DIFFERENT MICROORGANISMS ON PLANT BIOMASS

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Microorganisms are an integral part of the soil that helps it thrive and establishes beneficial relationships with the plants that grow on it. They break down various organic matter and pollutants and restore the natural structure of the soil. The processes of synthesis of humid substances and the decomposition of residues depend on the biological activity of the soil – group and species composition of microbes and abundance of microorganisms, especially bacteria. The purpose of this study is to investigate and evaluate the influence of different soil bacteria and fungi on the growth of plant biomass by purifying these microorganisms and transferring them to a selected plant. Studies have shown that plants can increase the dispersion of organic pollutants in the immediate root background (rhizosphere). Several plant species capable of decomposing pollutants in soil were selected and their biomass change was monitored. The plants were grown with bacteria and fungi isolated from clean and contaminated polycyclic aromatic hydrocarbon soils. The plant biomass obtained from above and below-ground parts of the plant and estimated per unit area of land per unit of time is calculated. Microorganisms that promote plant biomass growth have been discovered and can be applied in crop production in the future and used for further research on plant biomass.

Keywords: soil, microorganisms, plant

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