

Biodiversity of Plants Rhizosphere and Rhizoplane Bacteria in the Presence of Petroleum Hydrocarbons

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Abstract : Following plants-barley (*Hordeum sativum*), alfalfa (*Medicago sativa*), grass mixture (red fescue-75%, long-term ryegrass - 20% Kentucky bluegrass - 10%), oilseed rape (*Brassica napus biennis*), resistant to growth in the contaminated soil with oil content of 15.8 g / kg 25.9 g / kg soil were used. Analysis of the population showed that the oil pollution reduces the number of bacteria in the rhizosphere and rhizoplane of plants and enhances the amount of spore-forming bacteria and saprotrophic micromycetes. It was shown that regardless of the plant, dominance of *Pseudomonas* and *Bacillus* genera bacteria was typical for the rhizosphere and rhizoplane of plants. The frequency of bacteria of these genera was more than 60%. Oil pollution changes the ratio of occurrence of various types of bacteria in the rhizosphere and rhizoplane of plants. Besides the *Pseudomonas* and *Bacillus* genera, in the presence of hydrocarbons in the root zone of plants dominant and most typical were the representatives of the *Mycobacterium* and *Rhodococcus* genera. Together the number was between 62% to 72%.

Keywords : pollution, root system, micromycetes, identification

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