

BIOREMEDIATION OF PETROPOLLUTED SOILS OF KAZAKHSTAN USING SOIL MICROORGANISMS, BIOHUMUS AND SPECIFIC SPECIES OF PLANTS

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Now the majority of traditional methods of restoration of petropolluted soils are not only inefficient, but also harmful. Alternative of such methods of clearing is restoration of the petropolluted soils by bioremediation with the help of biologically active preparations.

Bioremediation of the petropolluted soils includes consistently following stages. Firstly oil on a surface of the polluted sites (0,2 hectare) is burnt, then ground is loosened, humidified and brought in with mineral fertilizers (diamonium phosphate) at the rate of 40 kg per hectare. At the following stage, ground is brought in with biohumus or vermicompost at the rate of 3 ton per hectare with the purpose of creation of favorable living conditions for microorganisms' destruction of oil. At final stage the processed soil is sown with seeds of perennial grasses, which are resistant to products of biodegradation of oil.

Our research has shown that biohumus and its components are highly effective means for improvement of polluted and impoverished soils. Biohumus is an effective biostimulator of the soil native micro flora participating in biodestruction of oil. The developed complex technology of bioremediation of the petropolluted grounds allows cleaning soils from oil and oil products and restoring biocenosis in short terms.