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BioSoilReactivation

Cleansing, stimulating, and fertilizing contaminated soils using microorganisms and organic acids

Degradation of oily contamination on soils and agricultural areas after floods – reactivation and stimulation of microbiological soil cultures – biological fertilization and biopesticidal inoculation of the soil.

Summary

Floods pollute agricultural land and gardens. Above all, oils and diesel are spread over a large area and contaminate soil and water. Naturally existing microorganisms cannot break down the contamination efficiently and promptly, depending on the circumstances – which in turn makes it impossible to use the areas immediately.

Together with partners, *ekolive* offers an ecological technology that uses microorganisms and organic acids to remove impurities, microbiologically renaturing and stimulating the soil, developing pesticidal effects, and preparing the soil for further use.

Microbiological inoculations can permanently remove contamination and restore soil fertility.

Consequential flood damage

Flood events cause massive pollution and sedimentation on agricultural areas and gardens. Further pollutant inputs are to be expected. The water mainly distributes oils and diesel from flooded and leaking heating oil tanks, machines, and cars. Pumping out the flooded and oil-polluted cellars into adjacent agricultural areas also leads to the accumulation of oily material on the soil surface. One litre of waste oil can contaminate up to a million litres of water – and since heating oil spreads quickly on water surfaces after its release, large areas are contaminated – which in turn leads to major environmental damage in aquatic organisms, flora and fauna. One cubic meter of oil spreads over a water surface of up to 3 km^2. After the flooding has receded, the vegetation damage is clearly visible, especially in deep hollows, hollows, and ditches.

Autochthonous microorganisms break down the oil over time. In addition to the presence of the corresponding oil-degrading autochthonous soil bacteria, intensive ventilation that stimulates biological activity is decisive for this. However, where such bacterial cultures are inadequate, and where, above all, the necessary intensive ventilation is not possible, such a natural process may take a long time and make immediate further use of the areas impossible.

Solution approach

Together with partners, *ekolive* offers the appropriate technology: large-scale applications of a liquid biofertilizer, which contains both natural heterotrophic microorganisms, which are both oil-degrading and soil-renaturing, as well as organic acids, which in turn have pesticidal effects, as well as dissolved natural minerals that are suitable for further use of the soil contain important micro and macronutrients. In one step, the contaminations caused by floods are eliminated in a natural and ecological way, the microbiological soil cultures are restored and stimulated, and at the same time the foundations are laid for a prompt further and even ecological use of the areas.

Our biofertilizer is manufactured according to a bioleaching process registered as an EU patent, proven in several bioleaching projects in the EU.

Imprint and contact

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Our offer

ekolive offers a biotechnology for the in-situ cleaning of agricultural soils and contaminated material with the organic fertilizer ekofertile™, bacteria *microlive*® and bio-stimulation of the degradation of pollutants by *ekocomplex*®.