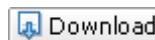
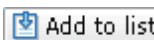
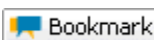


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Effect of bioformulation in reclamation of crude oil contaminated soil and determination of metal contents in plants grown after reclamation[Saikia, N.](#)^{a b} , [Singha, R.R.](#)^{a c}  ^a North-East Institute of Science and Technology (NEIST), Regional Research Laboratory, Jorhat-785006^b North-East Institute of Science and Technology, Regional Research Laboratory, Jorhat-785 006^c Biotechnology Department, North-East Institute of Science and Technology, Regional Research Laboratory, Jorhat-785 006**Abstract**

Crude oil is of organic origin and is an extremely complex structure of hydrocarbons. Besides carbon, hydrogen, nitrogen and sulphur many other elements are present in crude oil. In oil fields, during drilling, gathering, transporting or in some other operations, some quantity of the crude oil gets spilled over the neighboring areas. The spilled crude oil affects the bio-chemical nature of the soil. As a result no vegetation occurs in those areas. Therefore, a study was made with an objective to revive the soil condition for vegetation development. Biochemical nature of soil showed that soil is highly alkaline which is not suitable for seed germination, root and shoot development. Essential elements including heavy metals are detected in the contaminated soil samples. Further, beneficial microbes like nitrogen fixers, phosphate solubilizers, sulphur oxidizers and cellulose degraders and their activities which play a major role for plant growth and soil fertility are recorded less in such contaminated soils. As per the nature of soil sample a bioformulation was developed for reclamation of soil for seed germination and plant growth. Elements recorded in the soil were detected in various parts of the plants

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grown in contaminated soil after reclamation. Our study showed hyper accumulation of metal content in root parts than the shoot and leaves in one year old plants. © 2007 - Kalpana Corporation.

Author Keywords

Accumulation; Bioformulation; Contamination; Reclamation

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