



Bioremediation of DDT contaminated soil samples using dairy waste manure prepared from spoiled dairy products

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Abstract : DDT has potential to cause pollution in the environment which adversely affect the environmental balance and cause various types of diseases in human beings, plants and animals. DDT and its metabolites are known to be present and accumulating at numerous sites around the world. Considering the potential for negative effects due to its contamination, it is necessary to determine effective methods of remediation. The purpose of this study was to investigate the ability of certain microorganism obtained from spoiled dairy products to degrade 1,1,1-trichloro-2,2-bis(4-chlorophenyl) ethane (DDT). 11 Different bacteria such as *Coccobacillus*,

Staphylococcus, *Bacillus*, *Streptococcus* and *Coccus* and 4 different fungi such as *Aspergillus*, *Mucor*, *Rhizopus* and *Penicillium* were isolated from spoiled dairy products such as curdled milk, whey, spoiled curd and cow dung which shows the potency of utilizing DDT as sole source of carbon and converting DDT to its various substituents which are less toxic to environment. Compost was prepared by the use of these dairy products. The degradation of DDT in soil samples by pure dairy isolates and in prepared compost were analysed and estimated by using FTIR. It was observed that the bacteria and fungi isolated from the dairy waste and prepared compost has the capability to degrade DDT as DDT was converted to DDD, DDNU, DDOH, DDMS.

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