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Local Herb Can Fight Endosulfan Toxicity in Soil

The people living in the endosulfan-affected regions of the state, are facing risks due to the contamination of soil, but there is now a silver lining.

The Centre for Water Resources Development and Management (CWRDM), Kozhikode, has found a technique to remove endosulfan toxicity from soil by utilising a locally available plant 'Chittaratha' (Alpinia calcarata).

The study conducted by P S Harikumar, Scientist, CWRDM and K Jesitha a Research Fellow, found that the endosulfan can be removed from the soil during the first five days by applying nanoscale - Zero Valent Iron (nZVI) to the root of 'Chittaratha' plant. Complete removal is possible within 15 days.

"Normally the degradation of endosulfan from soil takes years. Our experiment involves applying nZVI to the root of the plant using enhanced phytoremediation technique for the removal of endosulfan. Among the different plant species selected for the

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study, Chittaratha (Alpinia calcarata) was found to be most effective," says Harikumar.

The plants aged 2 weeks were transplanted to pots containing soil artificially spiked with endosulfan and nZVI. "We kept monitoring the soil till the concentration of endosulfan reached below instrument detection limit," Harikumar said.

'Chittaratha' is a common plant and the low-cost technique can easily be adopted in areas with endosulfan contamination. "Nano Zero Valent Iron is emerging as new option for the treatment of contaminated soil and groundwater," he said.

M A Rahman, an environment activist, says that in Kasargod, recent studies have proved that soil is free of endosulfan. However he said that the situation at Muthalamada in Palakkad and Chakkittapara in Kozhikode is not known.

"The findings of the CWRDM should be seen a positive one. But attempts are being made not to accept the findings," he said.

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