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### Screening of Twelve Plant Species for Phytoremediation of Petroleum Hydrocarbon-Contaminated Soil

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**Abstract:** Twelve plant species were screened for their phytoremediation ability for the cleanup of hydrocarbon-contaminated soil in Japanese environmental conditions. The plants were cultivated in a greenhouse for 141 days in 1/5000 a Wagner pots containing the experimental diesel-contaminated soil. During plant cultivation, the changes in the total petroleum hydrocarbon (TPH) concentration, soil dehydrogenase activity (DHA) and the number of aerobic bacteria were evaluated. The results of the screening experiment indicated that eight plant species (Italian ryegrass, sorghum, maize, alfalfa, Bermuda grass, rice, kudzu and beggar ticks) caused a more significant decrease in the TPH concentration in the planted diesel-contaminated soil than in the unplanted soil, and would be effective in the phytoremediation of petroleum hydrocarbon-contaminated soil in Japan. The TPH concentration was more closely related to the soil DHA than to the aerobic bacterial number. In this study we discussed the characteristics of the plants which are suitable for phytoremediation.

**Keywords:** [Diesel oil](#), [Microbial activity](#), [Phytoremediation](#), [Root](#), [Soil DHA](#)[\[PDF \(795K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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