

Eco-Toxicological Implications Of Crude Oil Pollution On Rhizophora Racemosas (G.F.W. Meyer)

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Abstarc :

An experiment was conducted in 2008 in Asaba, Delta State, Nigeria to evaluate the eco-toxicological implications of crude oil pollution on *Rhizophora racemosa* seedlings. Five crude oil levels of crude oil (0.0, 12.0, 18.0, 24.0 and 30.0%) per 1.5kg of flood soils served as the treatments. The experiment was laid out in a randomised complete block design with four replications. The results showed that oil pollution at 18.0, 24.0 and 30.0% significantly affected ($P>0.05$) the seedlings of the test plant in terms of plant height, number of leaves, leaf area, collar diameter and root, growth at the 5% probability level when compared with the seedlings grown in the unpolluted soils and those exposed to 12.0% of the oil. Root growth of the seedlings was significantly reduced ($P>0.05$) with increasing oil levels. At 30.0% oil treatment, root hairs were totally absent. The study has established that *R. racemosa* seedlings tolerated all the crude oil concentrations used. No death was recorded throughout the trail period although significant reductions were noticed with increasing oil levels and this may have implications on the growth and establishment of the red mangrove. Conclusively, *R. racemosa* seedlings conserve as a bio-indicator of pollution and can be recommended for use in area of low levels of pollution for environmental clean-up or bioremediation. [Agbogidi, O.M. Eco-Toxicological Implications Of Crude Oil Pollution On *Rhizophora Racemosas* (G.F.W. Meyer). *Nature and Science* 2011;9(1):45-49]. (ISSN: 1545-0740). <http://www.sciencepub.net>.

Key Word :

Toxic implications, crude oil pollution, *Rhizophora racemosa*, ecosystem

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